

Appendix 1 - Background information

Site and woodland description

Location, aspect and general composition

The plan area is situated on the Northern shore of Loch Ness and sits directly north of the village of Fort Augustus (see **Map 1 Location**) and includes the forests of Inchnacardoch, Moriston, Achlain, Port Clair, Dalcataig, Creag nan Eun, Balnacarn, Torgoyle, Balintombuie and Bhlaraidh. The forests within the plan area and located above the western shores of Loch Ness are situated within the wider A82 trunk road corridor. The forests and land within Glen Moriston serve as the backdrop along the A87 Skye/West coast road.

The landholding covers 9,678 Ha of which approximately 4,846 ha is afforested; this includes large areas of Plantation on Ancient Woodland Site (PAWS) (around 40% of the forest) that, although largely under non-native conifer cover, currently adds significantly to the potential of the area to accommodate species diversity. There is also 53 ha of Forest Research plots and seed stands. The following land bank within the forest is currently 730 ha. The majority of the remaining area, totalling around 4,100 ha is open habitat, internal open space and land under other management.

Scots pine, European larch, Japanese larch, Douglas fir planted in varying mixtures on drier soils and Norway spruce (*Picea abies* – NS) on richer flushes, but by far the most predominant conifer in the productive high forest is Sitka spruce. This forms significant elements of the crop on wetter and poorer soils, generally in pure stands but also in mixture with lodgepole pine (*Pinus contorta* - LP). On the higher slopes of Inchnacardoch, Moriston and Balnacarn Forest, where large areas of peats and gleys are found LP was planted in pure crops. Common juniper (*Juniperus communis*) is found naturally occurring throughout the plan area, in both open and forested land, there are notable populations recorded in Bhlaraidh and Inverwick as a component of native pinewoods.

Broadleaf species found include common alder, ash, goat willow, eared willow, mainly in the riparian corridors, silver and downy birch, rowan, aspen, hazel and some sessile oak and pedunculate oak. The oak is comprised largely of veteran remnants present and probably extensive before agricultural settlement and then commercial afforestation. On the high ground above the previous rotation's tree-line at Port Clair and Dalcataig, surveyors have recorded dwarf birch (*Betula nana*) and common juniper.

In general broadleaf species are mainly confined to the riparian corridors, freely draining upper margins above commercial plantation and also within areas of historic native woodland restoration (Inverwick and Bhlaraidh). There is also a significant birch population within the wider Glen Moriston and this in turn creates a robust seed capacity leading to profuse natural regeneration where browsing is controlled. The areas of native broadleaves add much to the aesthetics of the landscape and to provide an element of biological diversity, with significant benefits for riparian habitat quality.

Significant areas of PAWS are recorded within the plan, spanning from Allt na Criche to Achlain and eastwards along slopes above Loch Ness. Historically much of the woodland on the south facing slopes is thought to have been largely oak and birch dominated, with pinewood predominating on north facing slopes.

The LMP area lies mainly between 30 m (above shores of Loch Ness) and 410 m above mean sea level (msl) in the north-east at Meall na Sroine (Creag-nan-Eun Forest) and ranging between 500 and 600 m above msl for the various summits on the upland massif between the Portclair and Coille na Feinne/Dalcataig forests. The established treeline for areas of twentieth century afforestation is typically 400 m above m.s.l (e.g. Creag nan Eun, Inchnacardoch, Inverwick and Dalcataig forests) but 250-300 m for Port Clair and Bhlaraidh.

Neighbouring land use

FLS ground within Glen Moriston is bordered by several 'traditional' estates: Glen Moriston, Balmacaan, Tomcrasky and Achlain and one by conservation charity Trees for Life. The traditional estates have sporting interests including deer stalking, field sports and fishing on River Moriston and surrounding hill lochs. Glen Moriston estate also owns an area of commercial forest to the east of Bhlaraidh and another area south of the Dundreggan reservoir. Achlain estate owns an adjoining block of commercial forest south and west of FLS' Achlain landholding. Trees for Life (TFL) manage Dundreggan estate - located between FLS' Bhlaraidh and Dalcriechart forest blocks - and are working to restore native habitats including woodland and the associated ecological processes underpinning them on their landholding and the wider area. Trees for Life and FLS have worked closely in the past on conservation projects within Glen Moriston and also Glen Affric, utilising volunteer resource, sharing expertise and knowledge and in sourcing local provenance planting stock. In recent years, a number of significant native woodland creation schemes have been undertaken at Achlain, Tomcrasky, Dalchreichart, along the River Moriston, Levishie and above the Allt Saigh.

To the west of the LMP is the Millennium Windfarm, located on Aberchalder and Achlain estate, consisting of 26 turbines. North of Glen Moriston is Bhlaraidh wind farm with its transmission lines passing through FLS ground to reach Auchterawe sub-station. This sub-station acts as major hub/node on the national grid and subsidiary lines also radiate from here with their overhead lines and wayleave corridors accommodated in the Plan's Inchnacardoch forest in the south of the LMP area. The Auchterawe substation continues to be developed (on adjacent SSE ground) to meet grid upgrade and future renewable generation schemes within its catchment. More details about the current utilities infrastructure is given in the last section of this appendix.

The southern and eastern extent of the LMP area is bordered by the settlements of Fort Augustus and Invermoriston respectively. Tourism is a vital component of the local economy, with the attractions of Loch Ness, the Caledonian Canal and Great Glen Way bringing a steady flow of people through spring to late autumn months. The forests in the vicinity are a backdrop to these important tourist attractions as well as providing

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habitual recreational opportunities for locals and further emphasises the importance of good landscape design and sensitive felling timings to satisfy the expectations of these stakeholders.

Various estates bounding the most northerly part of the landholding (Loch Ness-side forestry bounded on the uphill side by the Balmacaan Forest area) have a mix of conventional farming, forestry (commercial and conservation) and sporting interests. The Bunloit estate (most north-easterly neighbour) is managed by Highland Rewilding and – as the name implies – is primarily focused on restoration of natural processes across its woodland and open ground habitats.

Geology, soils, and peat

Fort Augustus LMP area is situated primarily on an underlying solid geology of Moine quartz- feldspar-granulite (BGS code 10) and in the south of the Plan area: Granitic gneiss (BGS code 12), both contributing to a general lack of drainage and derived soil fertility. A notable exception is along the Creag na Eun forest where the underlying lithology is Lower Old Red Sandstone (BGS code 75), resulting in soils of higher fertility. There is a higher component of ‘drift’ geology located in lower margins of the Plan area: a mix of glacial and alluvial sand and gravel deposits with diamicton till also found in western Moriston and Creag nan Eun.

Detailed soils survey and mapping has been carried out across the majority of the landholding’s mid- to lower afforested slopes (see **Maps 9a and 9b**) and this information is used to guide species choice in these areas. For the remainder of the Plan’s open and upland area, the James Hutton Institute soils data 1:250k is used and it is acknowledged that this dataset does not offer sufficient detail or resolution for accurately predicting soil type at any specific location. From these combined data, the soils within the Plan area are determined as predominately unflushed peats (see below), peaty and surface water gleys (soil types 5, 6 and 7), podzols and iron pans (types 3 and 4 respectively) but also with significant areas of skeletal rankers (type 13) in the upper margins and brown earths (type 1) found on lower, south facing slopes. The silvicultural prescriptions and assumptions made in this plan are largely specific to soil types referred to in the Forestry Commission’s *The Identification of Soils for Forest Management* (Kennedy, 2002) as well as through application of the organisation’s Ecological Site Classification and Forest Development Types software mapping and decision-making tools.

Bog habitat containing active peat formation (soil types 8, 9, 10, 11 and 14) lie mainly on unmodified open ground above afforested slopes where they are generally continuous and extensive in scale. All forests contain smaller, discrete plateaus and localised hollows where peat formation and accumulation has occurred historically, however the upper reaches of Balnacarn forest block (north side of Glen Moriston near Dalchriechart) and the upper margins of the Inverwick and upper Dalcataig forest on the south side of the glen represent the most significant areas where afforestation has attempted to artificially drain and establish woodland during the second half of the last century. Most notable – and subject of peat restoration proposals within this Plan - are the upper reaches of the Balnacarn forest block which is also contiguous with peatland restoration proposals already initiated to the east of this block. Opportunities for further potential internal wetland and peatland habitat restoration are largely only revealed after felling, when landform is clear and hydrology can be accurately assessed. As a consequence, site level proposals of this nature are often developed and agreed at work plan stage with the Region’s Environment and peatland teams as well as FLS’ national open habitats and species ecologists.

Climate and predicted climate change

The LMP area has an annual average accumulated temperature range of 1,200 to 1,300 day-degrees above 5°C within the glens and at loch-side (600-700 at hill summits). Typical annual rainfall is 1,360 mm (Fort Augustus) with an average annual soil moisture deficit of 70 to 120 mm (0 - 100 mm: classified as ‘Wet’). There are approximately 1,000 hours of sunshine annually and 50-55 frost days (of minimum air frost). Forest Research’s Ecological Site Classification (ESC) model summarises the climate as ranging from Warm, Sheltered and Moist at lower altitudes on south facing slopes along Loch Ness and Moriston river valleys respectively, progressing to Cool & Wet at increasing altitude towards the tree line. The plateau of open hill ground between the Great Glen and Glen Moriston reaches Sub alpine at its uppermost regions and summits.

Windiness - assessed using the Detailed Aspect Method of Scoring (DAMS) to model and predict the speed and frequency of strong winds – gives a significant proportion of the forest within enclosed glen floors and lower loch-side slopes range 9 - 12 and regarded as very suitable for commercial forestry with opportunities to adopt Continuous Cover Forestry (CCF) and extended rotations where appropriate. At the other extreme, the open hill and summits above Inchnacardoch, Balnacarn and Glen Moriston range from 16 to 23 which is above the limits for productive timber forestry. In between these two extremes, occupying the mid-contour slopes, DAMS range from 12 to 16 (the lower values for the more sheltered east & south-east facing slopes). A DAMS map is included in this appendix in the Windiness section below. The ESC modelling tool utilises warmth, wetness, continentality and windiness data to inform potential tree species choice – as well as recommendation for practical tree crop rotation length.

Future climate predictions are difficult to make accurately to a local level. The Adaptation Scotland programme provides an overview of UK climate projections extrapolated from historic Meteorological Office climate data. Currently this modelling does not provide regional discrepancy projection(s) but draws broad brush conclusions for this region for the 21st century and is expected to result in:

- Warmer summers and a longer growing season;
- Fewer frost days and milder (overall) winters;
- Increased instances and periods of summer drought;
- Increased and prolonged winter rainfall and increased frequency and intensity of summer rain storms;

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- Increased wind – currently anticipated as an increase in *frequency of storm events* as opposed to an increase in *peak wind speeds*.

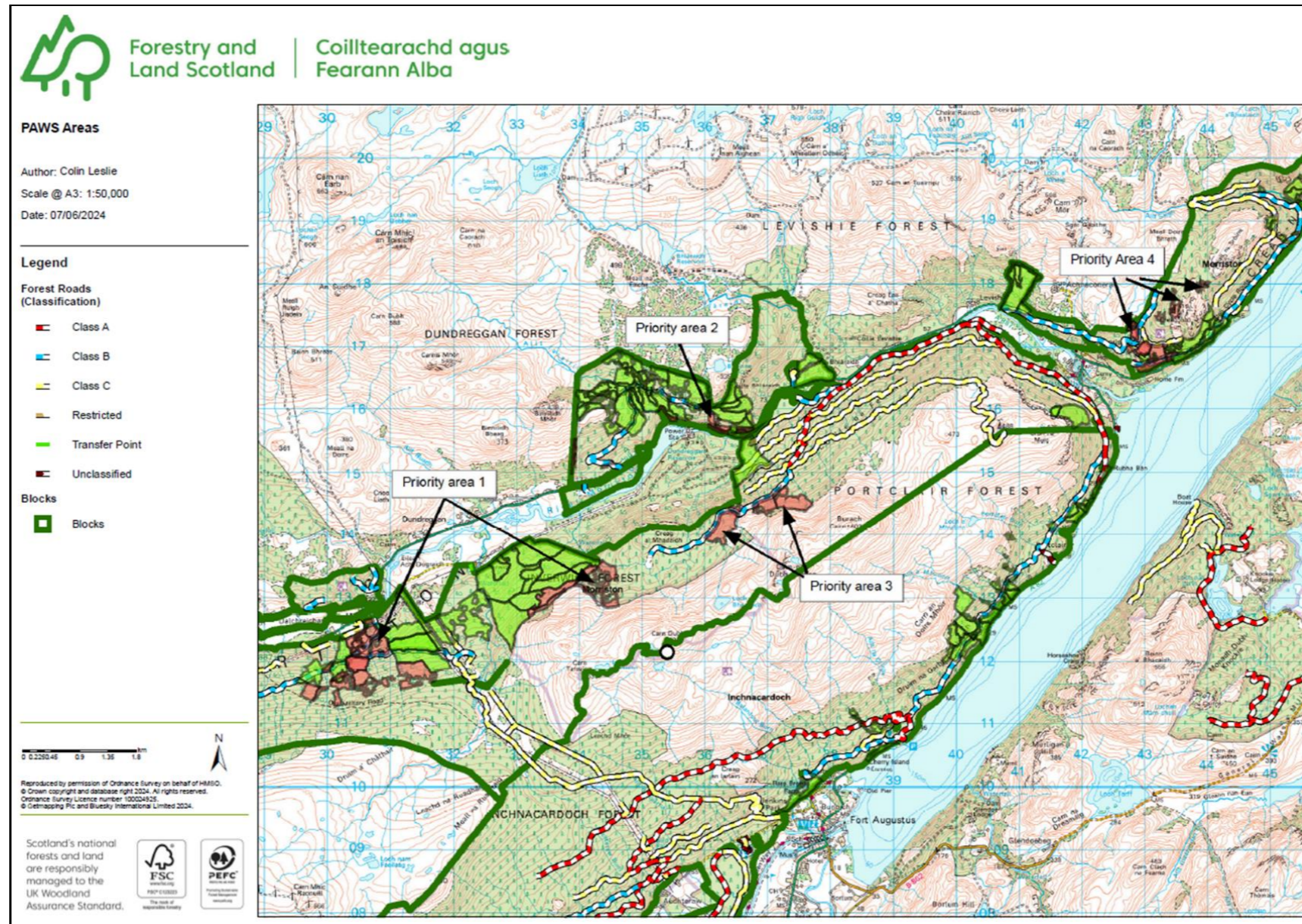
In recent years there has been an increase in occurrence of strong (and occasional storm-force) wind events from untypical directions - resulting from minor changes and unpredictability in normal jet stream behaviour through winter months. This has resulted in some extensive windthrow of mature/over-mature conifers that have grown up (and rooted and branched) whilst accustomed to extreme forces from the more typical south-westerly winter storm direction.

Forestry has a significant role to play in mitigating (or not) the effects of climate change. Building resilience against extreme weather events underpins all FLS' proposals but is particularly relevant within the Fort Augustus LMP in relation to tree health (susceptibility to future pest/disease threat) and improving the resilience of power line networks, public road infrastructure, water courses and settlements.

Key habitats and species

Notable European Protected Species (EPS) and Scottish Biodiversity Strategy (SBS) species priorities and actions supported by this LMP are listed and discussed in section 4.4.4 Table 14 of the main Plan document ('Protected and priority habitats and species'). Tables 15 and 16 detail SBS habitats/management requirements and invasive non-native species/actions respectively.

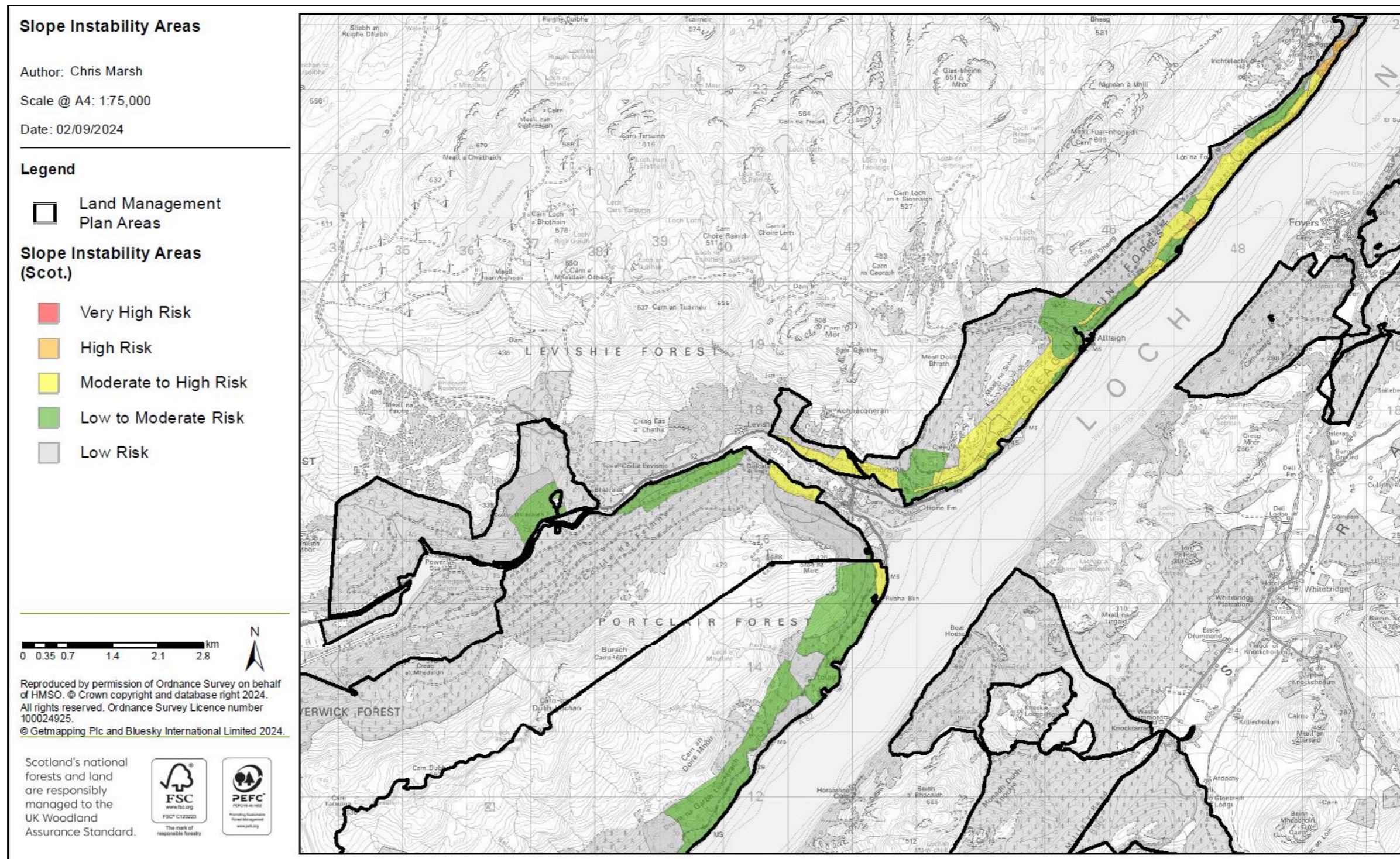
Plantation on Ancient Woodland Sites: Priority areas for initiating restoration works are described in section 4.4.3 of the LMP and illustrated on the following map:-



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Steep ground assessment

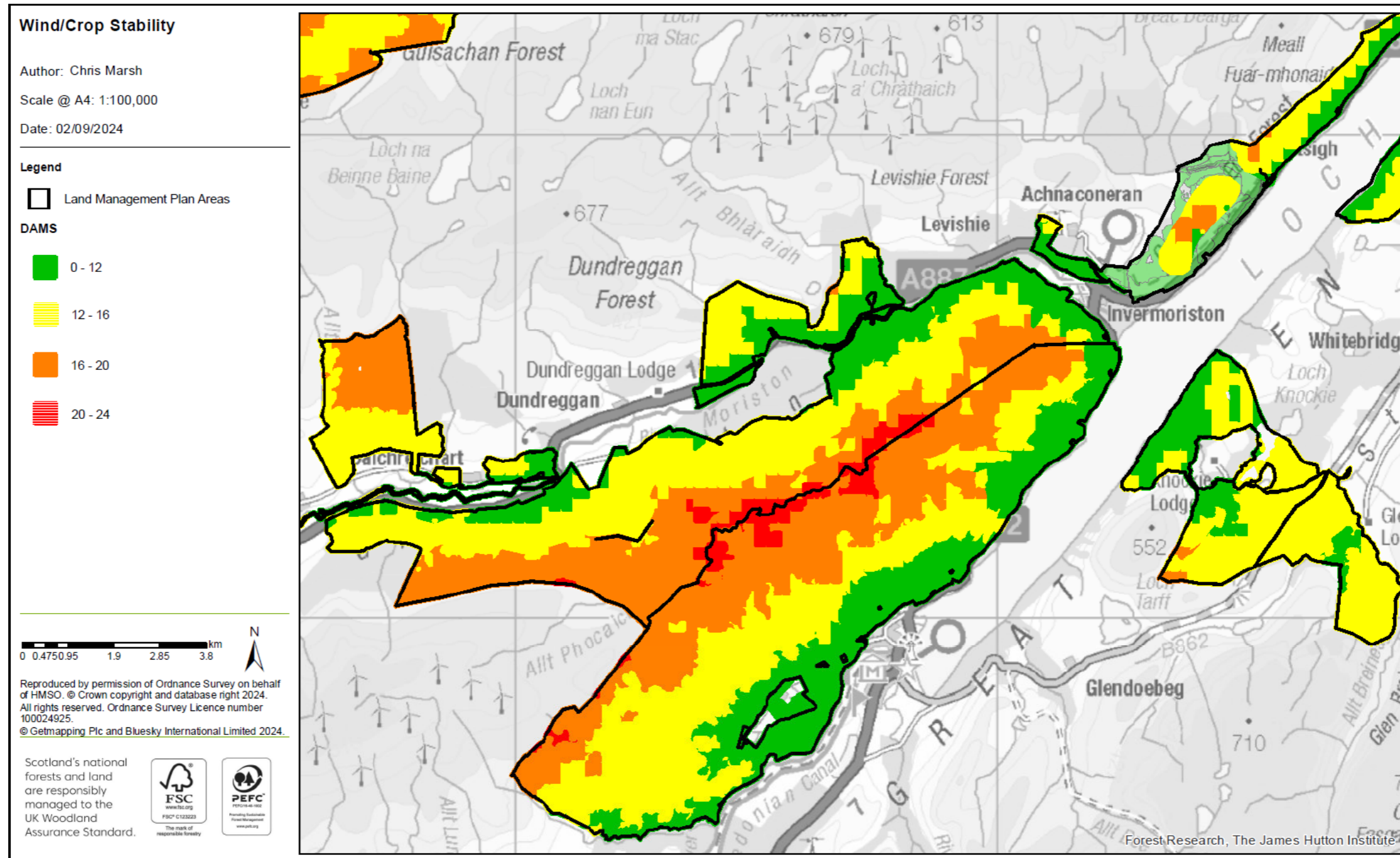
The map below shows the individual geotechnical survey areas (2015) and their derived instability classification. The commissioned survey work also identified specific 'point hazards' within each survey area that will require resolution in pre-operational planning of proposed civil engineering or felling works. The survey reports also recommend each specific felling operation be preceded by more detailed operation-focused assessment of how practical works might best be orchestrated or stipulating additional mitigation measures required to ensure work is done in the safest and most effective way to achieve objectives. In addition, LMP Maps 3a and 3b show these instability zones in the wider overall context of objectives and management concepts for the LMP area.



Windthrow risk

(see map below)

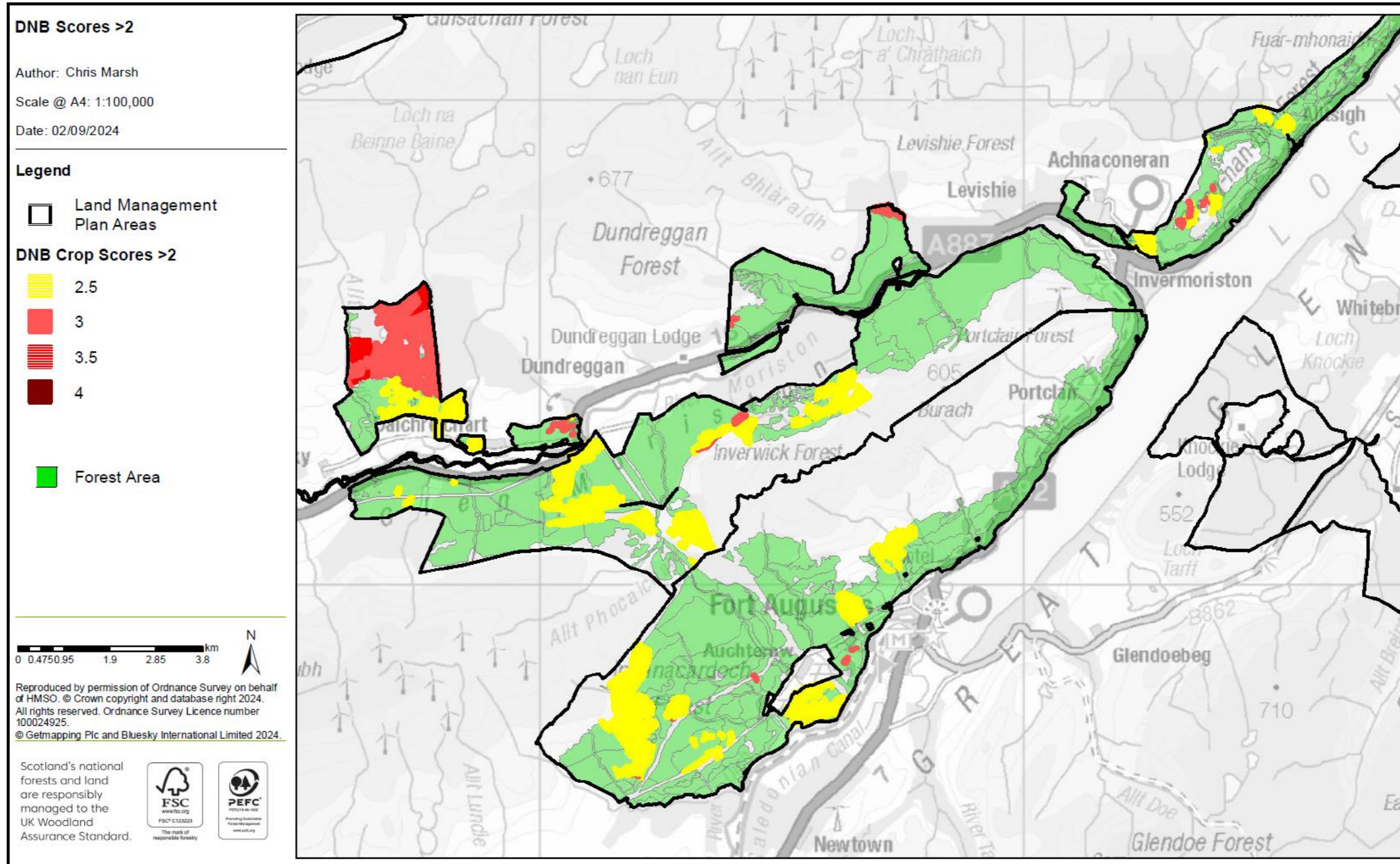
The majority of soils in the LMP area are suitable for growing productive timber tree species with only shallow to moderate rooting depths. Afforested upland areas have a DAMS (exposure score rating) in the range of 16 to 20 and consequently are inappropriate for a thinning management regime simply in terms of maintaining crop stability in such exposed locations until maturity/timber fruition. {Note: thinning is most typically prescribed when the DAMS score is 16 or less}. Afforested mid-slopes/flanks typically have 14 to 16 DAMS scores but productive timber trees presently growing there are either too mature to initiate a thinning regime and/or the slopes are too steep for thinning to be practically and routinely undertaken. The area offering the most accessible terrain with comparative shelter are the south-east facing slopes between Fort Augustus and Invermoriston (Balnacarn, Allt na Criche, Port Clair and Rubha ban) and the lower reaches of the Dundreggan/Bhlairstaidh forest block on the northern flank of Glen Moriston. Here DAMS range from 10 to 15 - offering the best opportunity for introducing thinning on younger crops whilst much of Dundreggan/Blairaidh and Dalchriechart forest blocks is already established as uniform shelterwood with historic thinning undertaken. Elsewhere maturing crops with no history of thinning are too large (and drawn) to initiate successful thinning now (though future productive timber crops established here may adopt such management).



Plant health

Significant pests and diseases are detailed in LMP section 4.1.9 Forest Tree Health.

The map below shows areas where *Dothistroma* Needle Blight infection has been identified by survey – initially by aerial survey but with follow-up ground truthing) – where an infection score greater than 2 has been made:



Hydrology

Surface & Groundwater catchments are illustrated in **Maps 10a** and **10b** – Key Water Features and described in **Appendix 7** – Water and Catchment Management.

Similarly significant **surface freshwater bodies** (rivers & streams) are highlighted on **Maps 10a** and **10b** and their current monitored condition detailed in **Appendix 7** Water and Catchment Management. Other burns and all lochans within the LMP area are below the threshold for baseline SEPA monitoring (only rivers with a catchment area >10 km² and lochs with surface area >0.5 km²) and are therefore not classified under the Water Framework Directive.

Flooding: the location and extent of the Potentially Vulnerable Area (PVA) is illustrated on **Map 10b** and an assessment of the potential impact of the LMP’s proposed forest management activities is also given in **Appendix 7**.

Private Water Supplies (PWS): most historic private water supplies situated within FLS forest ground for remote and disparate residential properties have been superseded either by the installation of individual property boreholes (see **Maps 10a** and **10b**) or else by public water main supply – much of this infrastructure implemented within the last Plan period (and accommodated within the LMP area – see water pipelines on these maps). At the time of LMP preparation (summer 2024) eight surface water abstraction points are still in existence although one is due to be replaced imminently by an off-Plan borehole. All PWS are mapped, and their management detailed, in **Appendix 7** – Water and Catchment Management.

Fire risk

(see also LMP section 4.9)

Risk Source	Risk Level – High/ Moderate/ Low	Mitigation
Ignition Sources		
History of wildfire	Low – No 21 st century instances of wilful fire raising or antisocial behaviour at public thresholds resulting in fires.	Emphasise FLS’ expectation that planned and notified muirburn be controlled at all times (i.e. adequately resourced) as per Muirburn Code. Precautionary signage at public thresholds if fire raising becomes a concern.
Public access, Visitor numbers	Low- Moderate visitor numbers, short duration activities/passing through (minimal camping)	Precautionary signage at thresholds during high fire risk periods of weather.
Fuel		
Surface fuels in young stands before canopy closure	Moderate - Mix of age structure throughout forest - surface fuels in young stands before canopy closure	Manage forest as a mosaic of age structures to minimise fuel load at any one time. Broadleaved woodland in riparian corridors will act as buffers.
Surface fuels in open or felled woodland	Moderate - Mix of open or thinned woodland as well as closed-canopy stands	Maintain minimum fallowing (maximum of 5-yr on account of pine weevil populations post-harvesting). Proactively restock non-regenerating coupes.
Dry understorey or ground vegetation	Moderate - Low to medium amounts of dry understorey or ground vegetation, especially dead vegetation after winter	Maintain varied age structure throughout forest, restoration of peatland and establishment of riparian/ broadleaved buffers.
Tree health damage, die-back	Low – Comparatively healthy trees. Most DNB-infected pine on wettest soils/peat	Monitor tree health and manage diseased/ damaged trees
Tree mortality, windthrow, deadwood, or brash	Low – Comparatively low levels of combustible deadwood and post-felling brash	Monitor tree health and morbidity extent with respect to any fuel load increase. Remove brash if deemed a risk in areas where fire raising likely.
High-risk (flammable) species (e.g. heather, gorse, young conifers)	Moderate – Heather moorland on upland plateaus/hill summits. Some disparate tree/shrub regeneration with areas of conifers growing on open heath above treelines.	Maintain mature trees and particularly Scots pine element within forest. Control extent of gorse along roadsides when prolific and continuous..
Free draining, organic or dry peat soils	Low – Predominantly peaty and surface water gleyed soils on afforested ground. Wetter gleyed soils, mires and deep peats occupying much of the open ground.	Restore deep peats and keep wet flushes open.
Site Conditions & Land Use		
Slopes, gullies, south facing slopes	Moderate – prevalent winter weather is frequently or else persistently wet; spring & autumn: mainly cool and humid; summer: warm, showery but with occasional protracted hot/dry spells.	Restock with species appropriate to soil type and conditions to ensure healthy trees. Riparian buffers and smaller coupes to reduce risk in event of fire.
Flammable habitats or a history of wildfire nearby	Low-Moderate – open moor and forest as well as agricultural land. History of muirburn on adjacent landholding.	Manage as a healthy mosaic of habitats and species. Establish broadleaved buffers along bisecting watercourses and bordering settlements. Maintain good neighbourly relations and be vigilant during muirburn season.
Assets and values at risk		
Proximity to people, property, utilities, or infrastructure	Moderate-High – Glen Moriston forest blocks have settlement/individual properties at close proximity (Dalchriechart, Torgoyle, Dundreggan, Invermoriston, Dalcataig, Jenkins Park, Auchterawe and Loch Ness-side forests: Allt na Criche, Portclair, Alltsigh, Primrose Cottage). A number of low voltage (at low height) and a main high voltage line (& pylons) located within managed open ground wayleaves corridors (reduced fire susceptibility).	LMP has designed, predominantly broadleaved, woodland in future habitat proposals - acting as buffer close to private properties. Allow routine vegetation control within wayleave corridors.

Ecological, historical, or FLS business assets	Low - No designated habitat with respect to flora and fauna. Natural Reserve areas are Core Pine Inventory areas with scattered veteran Scots pines and (flammable) juniper bushes/understorey, however this habitat is being regenerated and restored and consequently not extensive or well developed at present..	
Response		
Remote site, no on-site staff (late detection)	Low – Neighbours/ local residents and recreation users would detect fire early.	Increase site surveillance during periods of very high or extreme fire danger.
Accessibility constraints for fire fighting	Low - Good site access, good roads and load bearing bridges, hard standings but some very extensive afforested areas, much on steep slopes.	Maintain roads and access
Proximity to water sources	Low - Water source nearby. Insurance for fire-fighting costs including helicopter response	

FLS continues to work closely with the Scottish Fire and Rescue Service (SFRS) to prevent and tackle wildfires that threaten Scotland’s National Forests and Land. FLS support SFRS in their lead role for fire prevention and suppression through creating annual Fire Plans, maintaining a year-round staff duty and response rota, and providing SFRS with additional logistical support at incidences of fire on or close to FLS land. FLS’ primary objective is always to protect people’s health, safety and wellbeing.

Warmer summers, with increased incidences of droughty periods, will increase the periods when vegetation (standing biomass) can potentially succumb to wildfire. Areas of open vegetation – including upland heath, fallowing ground and young restocked/regenerating native woodland – have an increased capacity to burn on account of the quicker drying characteristics of these more open, shorter stature habitats and constituent plants vis-à-vis established woodland. As a consequence, instances of fire raising (e.g. unsolicited fires started in or within the vicinity of car parks and visitor thresholds/public access corridors) needs to be regularly monitored for and control measures (including precautionary signage) adjusted accordingly to minimise any increased potential wildfire risk to extensive areas of vulnerable establishing woodland.

Deer/Herbivore Management

Separate appendices cover deer management (**Appendix 8**) and feral wild pig management (**Appendix 9**).

Landscape character and visibility

The following landscape character assessment classifications relate to different parts of the Fort Augustus LMP area. The classifications are illustrated spatially on **Map 11 – Landscape Context and Issues** with some explanatory text and are discussed in relation to current forest composition and proposed forest management in section 4.6 - *Landscape* of the main LMP document. Additionally, **Appendix 10** contains photographic and computer-generated visualisations – as seen from twelve strategic viewpoints around the LMP area - to show forest compositional change over the next twenty years.

Broad steep sided glen with loch

This classification covers Loch Ness and its immediate environs. The *Highland Council’s SLA designation* (“Loch Ness & Duntelchaig”) recognises and describes ‘the vast linear expanse of Loch Ness within its dramatic landform trench, flanked by steep towering wooded slopes.’ It refers to:

- The dramatic sequence of landscape elements along its length;
- a horizontal water surface and adjacent steep slopes which create a simple distinctive profile of contrasting planes and edges;
- a generally horizontal skyline; and
- long vistas of grand proportion, where the scale of Loch Ness dwarfs man-made elements on and around it.

Qualities of note include the strong sense of linear enclosure and even skyline and the visual movement along the glen or across the water. At intervals along its length the forest cover gives way to small low lying pasture associated with settlements which nestle beside rivers flowing into Loch Ness, such as at Invermoriston and Foyers. There is a strong contrast between northern and southern slopes in terms of access, activity and settlement which is more extensive on the north. The southern side of the loch has a wilder feel, being away from the busy A82 trunk road. On the northern flank, the terrain slopes are steep and near-vertical in places, with extensive vegetated slopes and occasional exposed rock lend an alpine quality. Due to a lack of obvious ‘scale indicators’ makes it hard to scale this landscape. It is experienced by most people from an oblique angle from key arterial roads that skirt the shorelines and from on the loch.

Broad Glen around Fort Augustus

To the south west, the steep sides of the glen reduce in gradient and the glen floor widens at Fort Augustus, altering the landscape character at the end of the loch. Being more open, it lacks the drama of the glen to the north. Conifer plantations cover much of the undulating, gently dipping side slopes, whilst across the strath bottom is a mix of open agricultural land and small woodlands, the open water of the Caledonian Canal and settlement which add diversity to the flat alluvial plains at the base of the glen. Roads and a large substation with associated tall pylon towers and powerlines increase the amount of development that is visible.

Steep sided Wooded Glen- Eastern end

The northern side of the Great Glen is interrupted by Glen Moriston – a narrow, steep-sided glen with sizeable river at its base, narrow bottomed, with woodland filling the majority of the glen. Beyond Invermoriston, the settlement located where Glen Moriston intersects with the Great Glen, the glen is comparatively narrow and almost entirely wooded with a diverse range of conifers and broadleaves including stands of tall, straight birch covering the slopes. Visual movement (i.e. the intuitive tendency of the human eye/brain to wander, ‘read’ and interpret visual structure and diversity) is constrained within the glen itself due to limited opportunity to see anything beyond the immediate topography and vegetation.

Steep sided Wooded Glen- Western end

To the west the glen is wider, with more gently undulating side slopes and a flat valley bottom on which are open pasture and scattered properties. There remains a high proportion of woodland, mostly conifer plantation though it is less dominant than further downstream. The landscape increases in scale in the upper reaches of Glen Morison as the glen opens out as visibility increases extending to the open moorland and hilltops beyond the forest.

Rocky Moorland Plateau / Rugged Massif/ Rolling Uplands

Above and beyond the forested glen sides, is moorland which is expansive and open. The specific character of this varies depending on the bedrock which influences its character. To the north it is a more rocky upland plateau with some distinct peaks. The finger between Glen Moriston and the Great Glen (see Map 11) shows characteristics of the Rugged Massif and extends from here to the Cloutie ridge in the west. To the south and east the upland is gentler in character with less rocky outcrops and more rounded slopes that lack distinctive landmark features. These are high, remote areas where the dominant landcover is open moor, montane heath, and bog. Windfarms and telecommunication masts are strategically located on these areas and are conspicuous as are the associated pylon lines that cross it.

Public access and recreation

The Great Glen Way passes through the plan area from Grottaig (north-east) to Allt na Criche (south-west). This long distance walking route attracts over thirty thousand users each year and is of considerable benefit to local communities along the route. The walk is promoted and overseen by the Highland Council but with FLS responsible for routine maintenance and safety inspections on the FLS landholding. Work during the last Plan period has created an alternative route options on some sections of the GGW. These new routes have been designed to benefit both visitors and forest operations by largely following the upper boundary of Creag Nan Eun forest and through the open hill ground above Portclair which offers panoramic views over loch Ness whilst minimising interaction between forest operations and visitors wishing to take uninterrupted recreational access throughout the year.

Other formal visitor facilities, sign posted walks, car parking and picnic facilities are located at Allt na Criche, River Oich and Torr Dhuin. Wade’s Military Road is used as a long distance walk from Glen Moriston to Fort Augustus. A network of Core Paths and designated rights of way feature heavily within the plan area. The Core Paths aim to satisfy the basic needs of local people and visitors for general access and recreation and provide links to the wider path network throughout the Highland Council area. The Core Paths cater for all types of users - walkers, cyclists, horse riders, people with disabilities, etc. and are a main priority for maintaining continuous access through periods of forest management activity.

Historic Environment

FLS’ approach to, and management of, historic environment features is detailed in LMP section 4.5 and all features are recorded/mapped in FLS’ GIS. There are two scheduled ancient monuments and at least fifty undesignated heritage sites within the Plan area. Notable undesignated features include building remains of several old townships, remote sheilings and remains of the Invervigar sanatorium. Undesignated archaeological sites are the responsibility of the local authority’s archaeological advisors who provided no specific response to the external scoping of this Plan.

With regards to the scheduled sites, the following response/information was provided by Historic Environment Scotland at external scoping for this LMP:-

“SM11483, Fort Augustus – Bernera military road, 570m SE of Achlain: The monument comprises a stretch of 18th-century military road. It survives as a grass and moss-covered track approximately 340 m in length and 5.3 m wide, incorporating two single-arched masonry bridges. You can find further information including the legal documents here: <https://portal.historicenvironment.scot/designation/SM11483>.

We last visited the monument in 2017 when we noted that it was in generally satisfactory condition but that there were some significant localised problems. Trees were growing up to the edge of the road, encroaching upon it in some places, notably in the west of the scheduled area. Some regeneration was noted in other areas of the monument. At the time, we recommended that the monument would benefit from the removal of regenerating shrubs and noted that the establishment of an appropriate buffer after the area comes to be clear-felled is desirable.

SM794, Torr Dhuin, fort, Fort Augustus: The monument comprises the remains of a vitrified oval dun or fort of probable Iron Age date set on an isolated knoll which falls steeply away on the north and east sides overlooking the Great Glen. Outside the dun, and enclosing the knoll are the remains of a wall surviving mainly as a terrace. You can find further information including the legal documents here: <https://portal.historicenvironment.scot/designation/SM794>.

We last visited the monument in 2017 when we noted that the monument was in generally satisfactory condition but with some significant localised problems. The dun and ramparts were mostly clear of trees save a

stand of mature Scots pine in the north and north-east of the dun. Some broadleaved regeneration and extensive bracken growth were noted within the monument with birch and oak saplings occurring in the south and north of the scheduled area. At the time, we recommended that the monument would benefit from the removal of regenerating trees and the control of bracken growth. We recently gave advice on the felling of windblown trees near the monument noting the need to avoid impacts on the monument from felling and the desirability that any replanting should maintain key views from the monument over the Great Glen.”

Forest Heritage: Fort Augustus forests are rich in heritage with the first land bought by the nascent Forestry Commission bought within the Plan area. There is also a major research area called Lon Mor in the south of Inchnacardoch. Lon Mor (Gaelic for ‘big waste’ or ‘bog’) is an area of about 48 ha to the west of Fort Augustus where the soils are dominated by flushed and unflushed peats, interspersed with moraines and rocky ridges with peaty gley and/or ranker soils.

This area was an experimental reserve where considerable research was carried out in the pre- and immediate post-war eras to examine methods of establishing trees on nutrient poor soils in northern Scotland. Aspects investigated include species choice, cultivation methods, and fertiliser inputs. Results from the trial area featured in Zehetmayr’s comprehensive review (1954) of forestry on peat soils – the Lon Mor is the only one of the peatland reserves described in that publication which still survives. This historical aspect is one of the values of this site for current and future foresters and scientists.

Much of the reserve is composed of discrete experiments and trials, interspersed with open ground. From a scientific standpoint the individual trials are generally too small and/or with unreplicated treatments to allow proper statistical analysis. However, because of the age of some (>90 years) and the range of species (>20) that have been trialled, the reserve has considerable demonstration value when considered in its entirety. The lack of road access within the site plus the risks of windthrow mean that the most sensible future management option for the reserve is as Long Term Retention. This option also offers the potential opportunity to use the reserve to monitor the long-term dynamics of a range of tree species on peatlands in northern Scotland – a course of action recommended by Dr. George Peterken when visiting in 1994.

Invasive Species

Invasive non-native species for the LMP area include *Rhododendron ponticum* and some *Buddleia* species. These species have been the subject of previous efforts to control, if not eradicate, them during the last Plan period. This has utilised glyphosate as a foliar spray on small plants and (for large *Rhododendron* bushes) cutting/dismantling and stem treatment of cut stumps with glyphosate.

In 2022, FLS produced a revised approach to prioritising rhododendron control across the national estate on account of the negative impact on biodiversity that this species poses to woodland and open ground habitat particularly on Scotland’s oceanic west coast. Parts of the LMP area are now defined as Priority Rainforest Rhododendron area – where control is judged as making the biggest difference to landscape-scale biodiversity conservation. FLS are currently collaborating with other partners in an Alliance for Scotland’s Rainforest project that intends new control measures to eradicate seed sources in the area.

Renewable energy developments, utilities and other infrastructure

The table below details all existing renewable energy schemes within the plan area.

Name	Grid reference	Description
Balnacarn Burn	NH274 144 – NH273 131	0.8 MW run of river hydro scheme, commissioned in 2013. Third party access in place.
Allt Phocachain	NH324111 – NH 323 133	500 kW run of river hydro scheme.
Allt Larairidh	NH347 163 – NH353 157	500 kW run of river hydro scheme.
Allt na Fearnna	NH3536 0938	0.1 MW run of the river hydro.
Allt a’ Chaitchinn/Achlain	NH259 164 – NH260 144	Run of river hydro scheme (power rating: unrecorded).

There is one telecommunications mast within the LMP area but the site footprint is not owned by FLS. The mast is located on a hill summit south-east of Invermoriston and managed by British Telecommunications who have an access agreement with FLS for routine access for maintenance via the forest road network linking from the mast site through Dalcataig forest (Coille na Feine) to the public road (A82) at Invermoriston bridge.

The National Grid’s 400 kV Beaulieu-Denny line - upgraded in the first twenty years of this century - runs north-south, bisecting FLS’ landholding across open hill ground and afforested lower slopes to Auchterawe. Wayleaves and distribution lines also radiate from here including the 132 kV Skye/Western Isles Trident line, several renewable electricity lines (Dundreggan dam, Blairaidh windfarm) as well as a number of 33 kV overhead lines supplying electricity to surrounding settlements.

Appendix 2 – Consultation Record

Initial intention to review the Fort Augustus LMP was notified by email to the statutory and local stakeholders listed below (4/4/24) and a corresponding FLS webpage established to host Plan revision documentation. The table below details subsequent contact/discussion between FLS and stakeholders since this time. Where formal statutory responses were received by letter or email these are held by FLS and their contents/issues summarised in the table. Some additional face-to-face meetings undertaken with neighbours upon request. All issues raised pertinent to the LMP revision are also summarised in this consultation table. A public scoping meeting was also promoted locally and held at Glenmoriston Millenium Hall on 13/6/24 and meeting notes are included after the consultation table for transparency.

Consultee	Initial Notification	Response	FLS Follow-up
Scottish Environment Protection Agency (SEPA)	4/4/24	No response.	
Scottish Forestry (SF)	4/4/24	No reply expected. Inclusion of SF in scoping is a pre-requisite and evidences FLS' efforts to engage with statutory and other stakeholders over LMP revision.	<i>SF Operations Manager attended external scoping public meeting (Invermoriston 13/6/24) and subsequently spent one day (with additional SF Woodland Officer) with FLS staff visiting and discussing some new, proposed felling and restocking areas: Dalcataig & Inchnacardoch forests and A82 Project's Bark Sheds site.</i>
Nature Scot	4/4/24	<p><i>email 6/5/24 (attached here). Issues/management themes raised:</i></p> <ul style="list-style-type: none"> • Welcomes FLS objective to protect & enhance water quality of Ness catchment & SAC; • Advises adherence to agreed freshwater pearl mussel (FWPM) best practice guidance; • Encourages consideration (& prevention) of deer impact on adjacent designated ground; • Advises review/consideration of standing guidance for Geological Conservation Review sites currently afforested. 	<ul style="list-style-type: none"> • <i>One of six main objectives of new LMP is "Protect water quality, and enhance associated riparian habitat of designated river Moriston and the wider Ness catchment." with corresponding native woodland riparian planting envisaged on all currently afforested permanent watercourses through restructuring operations.</i> • <i>Adherence to FWPM operational guidance is stated/will apply to all forestry/civils work in SAC catchment.</i> • <i>FLS engage with neighbouring estates within the Deer Management Group. This group/forum is viewed as the most transparent, effective and collaborative way to develop & implement cross-border management/objectives.</i> • <i>The LMP's GCR sites (2 of 3 components) are 'un-notified' (i.e. outwith SSSIs), depicted on Map 9a, and occupied respectively by research tree nurseries and a long term retention native broadleaved woodland. LMP section 4.4.7 states that intention for woodland use to persist for time being, no activity with potential to disturb underlying geology (drift deposits) is planned within the Plan period e.g. new drainage, ground disturbance or machine over-running.</i>
Historic Environment Scotland (HES)	4/4/24	<p><i>Letter by email 10/4/24 – attached here.</i></p> <ul style="list-style-type: none"> • Drawing attention to three scheduled monuments within the LMP area (<i>actually only two present</i>) and another two at near distance. Requirement to apply for consent for any work on these sites. Request to include scheduled monument classification in LMP text and to interpret on site where possible. 	<p><i>Responded to HES email 11/4/24:</i></p> <p><i>Accept all HES advice relating to SAM management and incorporated into LMP text – including requirement for prior consultation and consent (SMC) with HES with regard to new operations proposed within the extent of any scheduled ground.</i></p> <p><i>Scheduled sites are included in on-site interpretation (threshold car parks) and further detail on FLS' walks/recreation webpages.</i></p>
Fort Augustus & Glenmoriston Community Council	4/4/24	No response to email notification. Comm councilor contacted FLS prior to public meeting in June – querying location of the meeting (suggesting Ft Augustus would be sensible location for the meeting).	<i>June 2024: FLS provided local meeting poster pdf by email and posted physical posters on village noticeboard and at forest entrances. Councilor contacted FLS to query rationale for choosing Invermoriston as public meeting venue (Ft Augustus being largest community by population) FLS responded Glenmoriston Hall chosen as it is geographically central to the Plan area making travel to the meeting fairly equal from Ft Augustus, Dalchriechart or Drumnadrochit. Councilor accepted this reasoning.</i>
Glenurquhart Community Council	4/4/24	No response.	
Highland Council (Forestry)	4/4/24	No response.	
Highland Council (Archaeology)	4/4/24	No response.	
Highland Council (Access Officer)	4/4/24	No response.	

Highland Council (<i>Roads Operational Manager</i>)	4/4/24	No response.	
Visit Scotland	4/4/24	No response.	
Forest Research	27/3/24	25/4/24 email reply listing open & closed research plots within Plan area – some to be re-evaluated post-Jan 2024 storms. Dalchriechart SP/Bi mixtures plots are likely subject of a 2024 PhD thesis..	
Glenmoriston Deer Management Group	4/4/24	No response.	
Glenmoriston Improvement Group	4/4/24	No response.	
Ness District Salmon Fishery Board	4/4/24	No response.	
Ness and Beaully Fisheries Trust	4/4/24	NBFT website states no current staff and that any correspondence be directed to District Salmon Fisheries Board (<i>this then done.</i>)	
Scottish Water	4/4/24	Email 5/4/24 – Catchment Liaison Officer acknowledged and thanked re opportunity to input on LMP. Deferred input to a colleague working on a larger Loch Ness catchment water quality project. This officer did not subsequently respond.	
Scottish & Southern Electricity (SSE)	4/4/24	SSE' Transmission Asset Management team emailed acknowledgement of LMP notification (5/4/24) and planning to respond if necessary within 30 days (see SSE-N's follow-up below).	
SSE-Network	4/4/24	21/5 e-reply (Forestry Project Manager lead) Ensuring FLS are aware of ongoing planning proposal for new Bhlaraidh windfarm grid connection proposal.	<i>FLS response: Yes, some additional resilience felling had already been proposed and an amendment approved by SF to accommodate this new wayleave if formal planning approval is given. As this planning permission decision is still outstanding and consequently no resilience felling yet to proceed, the new LMP intends to re-apply for this specific felling approval.</i>
Scottish Canals	4/4/24	No response.	
Mountaineering Council of Scotland	4/4/24	Email 9/5/24 (attached): Concern that new fencing may block existing walking access over LMP ground to reach 'Grahams' on adjoining land, requesting adequate crossing points included in new fence lines.	<i>FLS email response 9/5/24 – Thanks for response. Clarified that there is no new fencing (that may obstruct existing access provision) planned by new LMP. FLS' Visitor Services manager also made aware of the 'Grahams access' comments for information.</i>
Royal Society for the Protection of Birds (RSPB)	4/4/24	No response.	
Confor	4/4/24	No response.	
Neighbours			
Trees for Life	4/4/24	Email response (6/5/24 – attached) – <ul style="list-style-type: none"> • Supports landscape-scale native habitat connectivity objective; • CPI surveys have observed medium to high deer impacts - need to address as well as maintain important fencing with neighbours; • See no future for Hemlock in productive woodland, need to reduce reliance on Sitka (pest concerns) and not mix with SP on PAWS. • Non-nat regen cleaning an important management task in PAWS; 	<i>FLS intend to write in response to issues raised when notifying TfL of submission of draft LMP to forestry regulator: Restructuring to appropriate native woodland types is prescribed for all PAWS – including resolution to clean non-native regeneration from restocked/regenerating coupes. Plan will oversee further reduction in reliance on Sitka spruce: 28 to 13% over 20 yrs (and no SS in SP mixtures on PAWS). Plan does not advocate any new hemlock planting; FLS repeatedly requested sight of TfL sponsored CPI surveys (four times) but these were not subsequently supplied. LMP's DMP states current intention to implement deer control and these objectives with respect to CPI & PAWS restoration.</i>

		<ul style="list-style-type: none"> Should use more productive broadleaves silviculture as exemplar. 	<i>Draft LMP plans new future productive broadleaves areas (100 ha in Plan period and minimum 100 ha in next Plan period).</i>
Glenmoriston Estate	4/4/24	No response.	
Glen Doe estate	4/4/24	No response.	
Bunloit Estate/ Highlands Rewilding	4/4/24	11/4/24 Head of Forestry replied and subsequently spoke with Planning Forester (16/4) – requesting FLS consider additional non-native conifer felling at the estate boundary at Bark Sheds/A82 Project. Spruce regeneration was an ongoing issue in their adjacent ASNW and about to FTR current regen cohort. Would like seed source removing if possible	<i>FLS Planning Forester canvassed opinion on possible additional spruce felling at Bark Sheds. There is a reluctance to add new felling and timber export arrangements which may conflict at any time with the high priority A82 Project. Although felling seasonally the Project (and project partners and sub-contractors) used year-round access to complete other aspects of the project. There did not appear to be any particular benefit (save for helping a neighbour) in trying to bring this felling forward. It was decided to decline the request to propose felling of the remaining Bark Sheds spruce coupe within this Plan period. It will however be programmed for felling in phase 3 (2035-'39) once the lower 2022-clear-felled slopes are restocked and establishing well.</i>
The Inch Hotel / Inchnacardoch Lodge	4/4/24	5/4/24 email: Thanks for invitation to comment. Will check consultation details with hotel management but don't expect the Plan's proposals will inconvenience them.	<i>FLS acknowledged this response.</i>
Glenmoriston Millenium Hall Community Association	4/4/24	No response – although the hall committee were extremely supportive in helping set up and host the June public meeting in the Hall.	
West Glenmoriston Community Trust	10/5/24	Email reply 17/5/24: generally supportive of LMP long term objectives. Correspondence (attached) sought clarity on a number of incidental issues (access, deer management, fencing, thinning prescriptions etc).	<i>FLS will respond to all queries posed when notifying the Trust of the submission of the draft LMP to Scottish Forestry. None of the points or issues raised in the Trust's correspondence challenges or is in disagreement with the indicated intentions of the new LMP so a separate letter is proposed to address these wider issues and interests.</i>
Auchterawe resident	4/4/24	Coincidentally met at her property boundary (April) – was concerned about January storm-damaged trees on her boundary and what intentions to clear them and then replace (with what)?	<i>Has subsequently been updated by other FLS colleagues as to intended timescales for felling/clearance in the new Plan. Planning forester emailed her (15/7) to update her on the public meeting which she had missed and to update her on felling timescales in new proposed Plan. She hopes that the felling will be given a sense of urgency if possible.</i>
Blairaidh resident	4/4/24	No response. <i>Was included as this residential/commercial tourism business had been in correspondence with FLS during the last Plan period with regard to felling schedules within the vicinity of their property/business (Blairaidh/Dalcataig)</i>	
Forest Glen Holiday Park	4/4/24	Met to discuss FLS' initial potential felling coupes around Invermoriston. Discussed their rejection of FLS' Scots pine-based restoration approach, favouring current spruce-dominant landscape, believing this to also offer best slope stability, visual and ecological fit (with geology and climate akin to N American natural range for spruce). Opposed to the large clearfell coupes approach of FLS – suggest only continuous cover forestry be carried out (i.e. thinning, selective felling) as think this to be most appropriate management here - or else leave as long term retention (minimum intervention). FLS re-iterated why PAWS-led restructuring was the objective and that thinning regimes were impractical and potentially unsafe with current mature, un-thinned forests around Invermoriston/Dalcataig. Also disagreed that spruce was the best slope stabilising woodland. FLS would try to re-schedule some immediate felling ideas proposed in their vicinity in line with assurances made to them in 2015. <i>Email rx'd 6/9 for update on Plan progress/felling intentions. FLS reply (9/9) with draft fell, restock and future habitats maps - stating new draft Plan imminent (and will notify them) and soon to submit to SF. Email rx'd (16/9): still asserting discrepancies between draft Plan's felling plans and earlier FLS assurances - requested a meeting. FLS Regional Manager and LMP's Planning Forester met proprietors (1/12) to listen to outstanding concerns and objections and then re-iterate objectives: resilience (slopes, crops & infrastructure) and environment-led restructuring in line with SG's Climate Emergency & Biodiversity Crisis recognition. Had conceded to 10-yr delayed felling of most conspicuous coupe south of property. Agreed to disagree about wider forest values & aspirations.</i>	
Nick Wright Planning		Email rx'd 15/4/24 – introducing Nick as lead consultant in ongoing Local Place community planning/participation exercise. Requesting to be notified of FLS' public meeting was arranged.	<i>FLS notified him of the upcoming meeting dates and – when unable to attend – emailed a copy of the Meeting Notes (attached here) to evidence local interest, concern and discussion. Nick subsequently shared community participation commentary relating to forestry, forest access, issues and aspirations. This was forwarded to FLS' Visitor Services for information.</i>

Fort Augustus LMP Revision – Spring/Summer 2024 – External Scoping

Evening public meeting: **Glenmoriston Millennium Hall 18:30 - 21:00 Thurs 13th June**

Advertised:

Email (29/5/24): all identified local stakeholders (estate, business & residential neighbours) & two community councils.

Facebook posts: Comm Council, Glenmoriston Improvement Group.

Noticeboards (3/6/24): Fort Augustus shop/filling station, Invermoriston shop, Torr Dhuin & Allt na Criche FLS car parks.

FLS threshold posters (pinned to gate posts 3-5th June): Achlain (2), Torgoyle, Dalchriechart (2), Balnacarn, Dundreggan, Dalcataig, Rubha Ban, Allt Saigh, The Muir (2), Jenkins Park, FLS office (2).

Meeting notes

c.20 people attended from across LMP catchment: Dundreggan/Redburn, Invermoriston, Port Clair, Jenkins Park, Auchterawe.

FLS: Chris Marsh (presenting), (other FLS staff supporting) Sandra Reid, James Reid, Ian Allsopp & Luke Wilson.

Scottish Forestry: Dunstan Cribb (Operations Manager - Regulations and Development)

4 A1 paper maps displayed on tables in the hall:-

Draft Felling proposals (NE & SW areas separately);

Long-term Future Habitats (NE & SW areas separately).

Introductory PowerPoint slides then live FWeb presentation (FLS laptop -> hall's large TV screen).

CM outlined function of a LMP and need for 10-yr consultation & review (regulatory compliance & certification) and signposted location of online consultation documents/contacts. He described & displayed:

- *extent of FLS ownership, current woodland composition (species and production/conservation areas),*
- *future habitats ambition (PAWS-led restructuring: Glen Moriston & A82/loch-side slopes; non-native productive conifers at Inchnacardoch);*
- *peatland restoration proposal (Torgoyle) and*
- *new forest road & bridge link, north/above Invermoriston village.*

Main drivers for management over next 10 years:

- *continued restructuring of non-native conifer forest to native woodland composition (especially Glen Moriston & Loch Ness side) and*
- *conventional fell/restock of maturing plantation in non-PAWS areas (last Plan objectives also),*
- *pro-active felling of DNB-infected lodgepole pine in vicinity of core pine areas,*
- *commencement of pre-emptive felling of larch (re encroaching notifiable disease and new FLS Larch Strategy),*
- *need to begin felling of many previously-retained 1920s/30s conifer stands due to climate change resilience (public & infrastructure protection),*
- *continuation of A82 project (very large trees on steep loch-side slopes: public road safety & resilience).*
- *description/discussion of ongoing windblow clearance at Auchterawe (by Plan amendments: Jan-May 2024).*

Questions raised & discussed:

- **River Moriston SAC – what controls on possible wildlife impacts (i.e. insect life)?**

CM: SAC designation made and monitored by NatureScot who are a statutory consultee in the LMP review and so can comment and object to FLS plans likely to negatively impact. Also SF undertake a Habitats Regulation Assessment of the draft LMP's potential impact as part of their approval process (again can object or recommend changes).

- **How long will the tree felling along Loch Ness-side take?**

CM: At least the next ten years (i.e. whole of the next LMP period). The felling contract only runs outwith tourist season and is a very complex and slow process with a long way to go (shown on map/screen).

- **How long will trails around Auchterawe stay closed due to Jan windblow and clearance work?**

SR/JR: Uncertain at present as some contracts are active at present and some new ones imminent. There is an FLS site meeting next week to review progress as well as areas where the woodland integrity has survived storm damage and so will not now be harvested. SR intends to keep the community council informed of timescales for trail re-opening once this is clearer (a routine process for her anyway). Some trails along the riverside may remain closed for the rest of the year as storm damage has caused some windblow (so trails closed) but not sufficient damage for immediate felling under the priority plans for most-urgent clearance.

- **How long will the overall change from non-native to native woodland take: 10 years?**
CM: approximately 50 years – done in an incremental way so that there is always a continuity of woodland (i.e. habitat) throughout the change and predominantly led by either environmental priorities or maturing stands of commercial timber.
- **What proportion of FLS land will remain productive once restructuring complete?**
CM: has not done that analysis so far but... (showing on screen) approximately one-third of the Plan area would remain productive. This may include areas of restructured native pinewoods in Glen Moriston as this represented good nature-sympathetic forestry.
- **Will there be any native woodland planting in future productive timber woodland zone at Inchnacardoch?**
CM: Yes (shows Future Habitat map on screen) – particularly along watercourses (riparian woodland: environmental and ‘water temperature’ smoothing effect). Closer to the river/canal (“The Muir”) will continue with continuous cover Scots pine woodland where not storm damaged as well as extensive new oak/birch woodland restocking of areas with worst blown trees.
- **What is involved in peatland restoration?**
CM: This is intended where deep peat has been ploughed and planted with trees which have subsequently failed to grow. Trees can either be felled and removed (if large enough for timber/fibre recovery) or else mulched in situ. In both instances, all drains are then blocked and ploughed ridge/furrows smoothed to re-wet terrain and re-establish waterlogged peat-forming conditions.
- **Do you deal with non-native regeneration when it appears on felled ground awaiting native woodland establishment and on peat restored areas?**
CM: where the Plan prescribes native woodland establishment (after felling non-native conifers) or where peatland restoration is done, FLS are obligated to achieve prescribed objectives and so undertake ‘cleaning’ of non-native regen. This is timed efficiently: to exhaust potential non-native seedbed regen (so not too soon) and prior to new non-natives seeding or compromising ultimate native habitat objectives (so not too late).
- **Concern over wind stability of trees neighbouring private house/garden (Invermoriston): pre-emptive felling?**
IA: FLS harvesting staff typically look at such issues on a case by case basis. This specific adjacent clear felling would be undertaken within the next few years so unlikely to do any pre-emptive felling now that may inadvertently compromise stability of other trees prior to harvesting operations. Harvesting staff will liaise with these neighbours when/if wider clear felling is approved to see if early felling of specific trees is warranted.
- **Concern over timing of felling around Port Clair campsite: possible impact on water supply, on boundary trees and on access to campsite from Gt Glen Way?**
CM: FLS can time felling of trees around the campsite outwith tourist season, private water supplies are known/identified and will (and must) be protected/water quality conserved through operations (a regulation). Local planning and harvesting staff willing to visit and discuss likely extent and impact of adjacent felling.
- **Concrete blocks recently removed from entrance track to FLS’ Dundreggan quarry: possibility of future traveller/illegal music festival access?**
CM: will check with FLS civil engineers as to rationale for block removal & to see if vehicle access can be blocked again to dissuade incursion.
- **Concern over closed FLS bridge on forest road (Invermoriston-Achnaconeran) and evidence of recent (campervan) traverse.**
A timber lorry’s wheel broke through the bridge’s timber deck last week and FLS civil engineers inspected and closed the bridge (with prohibitive signs & taped off). Unsure on timescales for repair. CM will check with civil engineers and feedback especially re subsequent unauthorised use. IA: email CM with request for feedback.
- **Concern over the state of historic bridge on/under Jenkins Park public road.**
CM: suggest reporting to comm council to then feedback to Highland council roads dept. This road is a ‘Consultation route’ for timber haulage and – when FLS notify them of wish to use it - ultimately the council sets controls on the amount, frequency and timings of permissible haulage.
- **Concern over the amount (woodland & visual impact) of new overhead powerlines now (and planned) centred on Auchterawe sub-station.**
FLS working to influence and accommodate new powerline infrastructure as best as possible to avoid woodland impacts (visual & environment + management implications). FLS have iterative liaison with SSE over emerging plans and attend SSE/community liaison meetings. Ultimately new proposals are progressed through Town & Country planning permission (if consented) so FLS cannot stop developers proposing new projects.



Please complete this form to find out if you need consent from Scottish Forestry, under the **Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017**, to carry out your proposed forestry project. Please refer to Schedule 2 Selection Criteria for Screening Forestry Projects under [Applying for an opinion](#). If you are not sure about what information to include on this form please contact your [local Conservancy office](#).

Proposed Work							
Please put a cross in the box to indicate the type of work you are proposing to carry out. Give the area in hectares and where appropriate the percentage of conifers and broadleaves							
Proposed Work	select	Area in hectares	% Conifer	% Broad-leaves	Proposed work	select	Area in hectares
Afforestation	<input checked="" type="checkbox"/>	13.5		100	Forest roads	<input checked="" type="checkbox"/>	9.0
Deforestation	<input checked="" type="checkbox"/>	139.5	100		Forest quarry	<input checked="" type="checkbox"/>	2.3
Location of work		Fort Augustus Land Management Plan area					

Description of Forestry Project and Location
<p>Provide details of the forestry project (size, design, use of natural resources such as soil, and the cumulative effect if relevant). Please attach map(s) showing the boundary of the proposed work and other known details.</p> <p>FOREST ROADS: Within five years (2024 - 2029), FLS propose construction of seven sections of NEW ROAD (total length: 4,170 m) and two UPGRADED ROADS (1,810 m) - see Maps 1a, b, c and d and Map 2 at the rear of this form and LMP Maps 4a/b. Forest roads will be constructed/upgraded to minimum 44-tonne load-bearing capacity using unbound aggregates won and processed from existing or proposed quarries within the LMP area. Nominal road corridor width is 15 m - accommodating 7 m width road formation (minimum 3.5 m running surface width), side drain(s) and possible timber stacking verge (total area: 5,980 m x 15 m = 8.97 ha). LMP section 2.8 describes the purpose of each proposed road section. N.B. Two sections were subject of an approved Plan amendment and EIA SORF at mid-term review of previous Plan (2021) but not constructed prior to Plan expiry. One new road section includes installation of a permanent 21 m long x 4.2 m width 'Mabey Compact 200' galvanised steel panel bridge (with steel side rails) mounted on pre-cast concrete 'Legato' block abutments.</p> <p>NEW EXTRACTIVE SITES: four comparatively small extractive sites are similarly proposed in the first five years of the Plan period: distributed along the extensive upper forest road in Dalcataig forest, Glen Moriston (described in LMP section 2.8 and illustrated on Map 2 at the rear of this form/appendix) as follows:-</p> <ol style="list-style-type: none"> 1 Coire a Mhadaidh (NH 3537 1375) 0.08 ha (c.25 m x 30 m) 2 Creag Bheithe (NH 3625 1432) 0.38 ha (c.50 m x 70 m) 3 Meall a' Mhuic (NH 3727 1477) 0.98 ha (c.100 m x 98 m) 4 Coille na Feinne (NH 3834 1558) 0.88 ha (c.8 0m x 11 0m)



Environmental Impact Assessment Screening Opinion Request Form

PEATLAND RESTORATION/DEFORESTATION proposed on the northern plateau of FLS' Balnacarn forest block, Glen Moriston (see Map 1d at rear of this form/appendix and maps in Appendix 6): involving felling of gross 214.9 ha of lodgepole pine plantation and subsequent drain blocking and ridge-furrow smoothing of 139.5 ha and restocking of 75.4 ha with peat-edge woodland (NVC W4). Analysis and decision-making underpinning this proposal is presented in LMP Appendix 6. Restoration is to be achieved by a mixture of whole-tree mulching in situ of predominantly failed, checked or severely blighted/defoliated lodgepole pine or else conventional shortwood harvesting to fell and remove trees where stem diameter and timber quality is sufficient to warrant viable recovery of biomass for onward processing/use. Follow-on restoration operation is single-pass excavator-based ridge/furrow smoothing and drain blocking to reinstate natural water table and anaerobic bog functionality. The terrain includes several freer-draining hillocks and ridges where Peatland Edge Woodland is proposed by excavator-based mounding and planting (minimum 1,600 stems/hectare). Net deforestation is consequently 139.5 ha.

NEW WOODLAND CREATION of 13.5 ha is proposed by predominantly excavator-based hinge mounding and planting of nursery-raised native tree transplants (upland birchwood composition with some Scots pine - all local provenance zone or nearest neighbouring zone). The location is illustrated and labelled on LMP Map 6a (coupe 04075) as well as declared in LMP section 2.5).

Provide details on the existing land use and the environmental sensitivity of the area that is likely to be affected by the forestry project.

Proposed FOREST ROAD UPGRADES/NEW BUILDS are all in existing afforested areas managed for mixed conservation and productive timber objectives - necessitating Category 1 road specification. No ground traversed by, or immediately adjacent to, road upgrade/new-build corridors is environmentally designated. However roading operations undertaken within Glen Moriston are in the water catchment of the river Moriston SAC with its qualifying species (freshwater pearl mussels and salmonids) sensitive to diffuse pollution.

MAP 1a shows 'Balantoul Spur' (road extension: 550m) to access larch forest slopes above Jenkins Park; and 'Jenkins Park Hammerhead' - an off-road timber stacking, loading and turning 'T' junction to facilitate harvesting of adjacent storm-damaged and wind susceptible mature larch/spruce stands thus increasing resilience along Auchterawe single track public road and integral local feed 33 kV overhead powerline corridor. Main sensitivities in this vicinity are maintaining public road and recreational trail access during operations and deploying associated safety signage to keep public advised of hazards and any temporary access arrangements put in place to manage safety (i.e. temporary traffic management). Arrangements for safe working (or working during stipulated power outages) will also require discussion and agreement with SSE. There is potential for red squirrels to be occupying or foraging in these forest areas that may be disturbed/displaced by operations.

MAP 1b shows 'Inch North-West Spur Extension' (1,040 m) and 'Inch West spur extension' (1,140 m) which both extend forest roads along rides in first-rotation p1965-'70

Environmental Impact Assessment Screening Opinion Request Form

lodgepole/Sitka plantations due for clearfelling and restocking (for predominantly productive forestry objectives) spread over the next twenty years. Main sensitivity is potential impacts on riparian habitat and watercourses (sedimentation/diffuse pollution). Historically residential properties below this forest had surface-fed water supplies on the numerous river Oich tributaries in the forest. Most supplies are now replaced (or imminently being replaced by FLS) so that surface water run-off quality will be predominantly a natural environment, rather than potable drinking water, sensitivity.

MAP 1c shows the location of proposed 630 m link road (and 21 m fixed span bridge) just north-east of Invermoriston village. This area lies inside the local authority's Local Landscape Area designation and FLS civil engineers will therefore explore with Highland Council any requirement for formal Planning Permission to ensure visual impact is satisfactorily addressed. As with all afforested areas of Loch Ness-side and Glen Moriston, there is potential for seasonal, permanent or transient occupancy of forests by red squirrel, badger, raptors and pine marten which would be sensitive to operational disturbance. There is also a permanent watercourse (Allt Coinneag) that traverses the proposed bridged roadline and a surface water abstraction point - for private drinking water supply - on this watercourse/LMP boundary downstream from the bridging point and therefore conservation of water quality is both an environmental and drinking water sensitivity.

MAP 1d shows two road spur extensions in the Dalchriechart area: the 'Butterfly extension' (601 m spur extension) in the Balnacarn forest block and the 70 m 'Balintombuie Spur Extension' planned to allow thinning operations for continuous cover forest management in an adjacent forest block. A 460 m forest road spur is also illustrated - accessing the western side of the Dalchriechart forest block - requiring clearance of encroaching vegetation (thicket stage non-native conifer regeneration) and re-formation and a new running surface to allow vehicular access for proposed thinning operations within the block. All three proposed road projects are within the river Moriston SAC catchment and there are therefore water quality and salmonid/pearl mussel sensitivities to potential diffuse pollution. The Balintombuie and Dalchriechart road works are located at minimum 250 m and 240 m distance respectively from the SAC but with public road and private house/garden sites separating these roads/thresholds from the SAC boundary.

The NEW EXTRACTIVE SITES and a proposed FOREST ROAD UPGRADE (Map 2) are all located within Dalcataig forest - also located within the river Moriston SAC catchment (at > 750 m distance but with permanent watercourse tributaries Allt Creag Beithe and Allt a' Ghadaiche at closer proximity to the road and extractive sites) so water quality is a significant environmental sensitivity. No terrain in the vicinity of these sites or road upgrade is on designated terrain however there is potential for designated and/or sensitive wildlife species habituating some areas within the locality of the proposed work areas (e.g. badger, red squirrel, otter, pine marten, raptors).

The PEATLAND RESTORATION area (MAP 1d) was originally ploughed and afforested with lodgepole pine for timber production between 1981 and 1984 and - as soil and peat depth surveys have recently confirmed - are on a mosaic of predominantly Molinia / Eriophorum / Calluna bog with pockets/hollows of Calluna blanket bog and some localised (drier) mounds/ridges with remnant wet heath and mire vegetation amongst the dwarfed pine stands and where underlying soils are peaty surface water gleys and some podzols.

Environmental Impact Assessment Screening Opinion Request Form

The restoration process aims to reinstate the functionality of these predominantly peat-based, tree-less open ground habitats set in a wider landscape of open ground hills/ridges, neighbouring peatland restoration (eastern boundary) and a wider landscape patchwork of native broadleaved (conservation and productive) and native conifer (productive) woodlands. Restoration is to be initiated by either excavator-based access for whole-tree mulching in situ of predominantly failed, checked or severely blighted/defoliated lodgepole pine or else by conventional shortwood harvesting to fell (or shear) and remove trees where stem diameter is sufficient to warrant viable recovery of biomass for onward processing/use. Follow-on restoration operation utilises tracked excavator-based machinery to undertake furrow smoothing and drain blocking and has the potential to compact wet soils and disturb peat-forming vegetation and disturb soils/peats in waterlogged hollows and mires. Ground smoothing of historically ploughed ground has the potential to deposit peaty sediments into drains and ultimately on into downstream watercourses.

The restoration area includes several freer-draining hillocks and ridges where Peatland Edge Woodland is proposed by excavator-based hinge mounding and planting (minimum 1,600 stems/hectare). Diffuse pollution from these operations is the main environmental sensitivity during operations (SAC at minimum 2 km from restoration area but tributary Allt na Muic at minimum 40 m from some afforested ground for deforestation/ground smoothing). A longer term sensitivity is the potential of nutrients released from decaying mulched material leaching into nearby watercourses with consequent impacts on downstream biota and ecology. The restoration ground contains no designated vegetation/habitat.

A central freshwater lochan is (summer) seasonally occupied by Slavonian grebe whilst black grouse have been observed lekking on open ground outwith the perimeter boundary of the forest block (750 m buffer zones around five lek sites overlap with the forest area/restoration zone) and would be sensitive to ill-timed operations. There is potential for ground- and tree-nesting birds to be present and therefore disturbed or driven from the restoration or restocked areas by operations if they are present at that time (some permanent and some seasonal presence possible).

NEW WOODLAND CREATION of 13.5 ha is proposed predominantly by excavator-based hinge mounding and planting of nursery-raised native tree transplants (upland birchwood composition with some Scots pine - all local provenance zone or nearest neighbouring zone). Some manual screefing and flat planting proposed within riparian buffer zone. The location is illustrated and labelled on LMP Map 6a (coupe 04075) as well as declared in LMP section 2.5). The area contains no designated vegetation/habitat but contains two small permanent watercourses (and therefore water quality sensitivity) but no downstream surface-sourced private water supplies. A woodland creation Issues Log has been completed for this proposal and is attached to this document/appendix.

Description of Likely Significant Effects

Provide details on any likely significant effects that the project will have on the environment (resulting from the project itself or the use of natural resources) and the extent of the information available to assist you with this assessment.

Environmental Impact Assessment Screening Opinion Request Form

The provision of new, constructed FOREST ROADING will provide long-term environmental benefit as these routes will allow safe off-public-road access to productive forest areas reducing the need for ATVs (for forest and deer management) and harvesting/haulage machinery repetitively crossing long distances over unprotected soils and side slopes in all these areas - thereby reducing potential for soil disturbance, compaction, rutting and consequent diffuse pollution from routine access. The new road proposals at 'Balantoul Spur', 'Butterfly Extension' and Invermoriston Link' provide access for management with plant health, peatland restoration and landscape-scale PAWS restructuring respectively that would otherwise be impractical to initiate.

Creation of four small, distributed EXTRACTIVE SITES in upper Dalcataig forest to provide stone aggregates for road upgrading and maintenance reduces the requirement to source and transport stone aggregate from greater distances in the future - with a consequent reduction in negative impacts of longer distance haulage (public road wear/tear, increased road traffic and carbon expenditure).

The PEATLAND RESTORATION project aims to reinstate the functionality of compromised but predominantly peat-based open ground habitats set in a wider landscape context of (to the east) more peatland restoration (Trees for Life) and a mosaic of native woodland (peat-edge scrub woodland, productive and conservation-oriented Scots pine/birch woodland). This mosaic of native species-based habitat reinstatement and management is considered to be a better ecological fit than the present (and failing) non-native conifer plantations growing here.

Include details of any consultees or stakeholders that you have contacted in order to make this assessment. Please include any relevant correspondence you have received from them.

All proposals within this screening form have been declared and discussed with both statutory and other stakeholders during evolution of the new/revised Fort Augustus LMP. The LMP's Appendix 2 Consultation Record evidences all notifications and subsequent correspondence undertaken - none of which presented concerns or issues with the specific proposals considered here.

Prior Notification is still to be made to the Highland Council for all described proposals in line with local authority regulations for forest development works including peatland restoration and the proposed road/bridge link within the Local Landscape Area (Invermoriston). FLS will work within any conditions stipulated in confirmatory correspondence.

Mitigation of Likely Significant Effects

If you believe there are likely significant effects that the project will have on the environment, provide information on the opportunities you have taken to mitigate these effects.

PEATLAND RESTORATION

Environmental Impact Assessment Screening Opinion Request Form

Use of comparatively light (maximum 8-tonne) excavator to undertake drain blocking and furrow smoothing - to minimise unwanted compaction of peat/soils and lower-plant-rich wet heath vegetation on both access routes and operation sites. This methodology has already proven successful on other peatland restoration sites on the FLS Kinloch Hills LMP area (Kyle Farm, 2019 and 2020; Coire nan Cuilean 2021/22; Bealach na Cruinn-Leum, 2022). Both the tree mulching and ground smoothing/drain blocking phases will be done as single pass operations to limit unnecessary ground disturbance and/or compaction. Ground smoothing of old furrow/ridges will only be undertaken after temporarily blocking main drains from the site to minimise sediment risk to downstream watercourses.

Operations will be undertaken during the habitually drier months (May-October) with operations paused during periods of prolonged rain that could result in surface water flooding and sediment flow risk in excessively waterlogged operating conditions.

All peatland restoration contract work will be let and supervised to rigorously enforce UK Forestry Standard (FC's "Managing Forest Operations to Protect the Water Environment" and "Forests and Water": sixth edition) AND NatureScot-endorsed FLS Environment Guidance Note 5: Managing for freshwater pearl mussels during harvesting operations re-fuelling and working within the vicinity of open water and on wet and waterlogged soils within the catchment of these watercourses.

Mulched tree chip material will be dispersed to avoid any discrete piles of chips (with higher localised nutrient leaching potential) and all chips to be kept away from drain edges. A walkover of all ground within the peatland restoration area - and the access routes to and from the restoration areas - will be undertaken prior to operational works to ensure there are no resident, seasonally resident or scheduled species or associated features (i.e. otter couches/holt sites, pine marten dens) at risk. FLS routinely monitor the estate for presence and movement of scheduled raptor species and black grouse presence/seasonal activity and operations will comply with seasonal operating constraints as stipulated in FLS specific species guidance (see LMP Appendix 11 for full list of pertinent guidance literature).

NEW/UPGRADED ROADING & EXTRACTIVE SITES - Internal forest roads, bridges and quarries are constructed and maintained to, or within, specifications stipulated in the FLS' 'Civil Engineering Specification (version 1, 2020) and Forestry Commission's Operational Guidance Book 12 'Managing Forest Roads'. These documents also define planning consent protocols, the design and construction of ancillary roading infrastructure e.g. ramps, ditching and culverts as well as the competency assessment and oversight of third party contractors appointed for construction works. Compliance is also upheld with the following environmental and water quality protection regulations: Water Environment (Controlled Activities) (Scotland) Regulations 2011, Pollution Prevention and Control (Scotland) Regulations and Forestry Commission's (2019) Forest & Water Guidelines – 6th Edition. With respect to opening of new EXTRACTIVE SITES - there is some tree felling, brush handling and repetitive machine over-running envisaged within the vicinity of permanent watercourses that are tributaries of river Moriston SAC and consequently the FWPM Guidance Note 5 for FWPM catchments (detailed above) will also apply to these operations in establishing these sites. This guidance also stipulates working and material handling/storage buffer zones, use of silt fencing and traps and constraints on wet weather working.

Environmental Impact Assessment Screening Opinion Request Form

Sensitive Areas	
Please indicate if any of the proposed forestry project is within a sensitive area. Choose the sensitive area from the drop down below and give the area of the proposal within it.	
Sensitive Area	Area
Deep peat soil	139.5
Select...	
Select...	
Select...	
Select...	

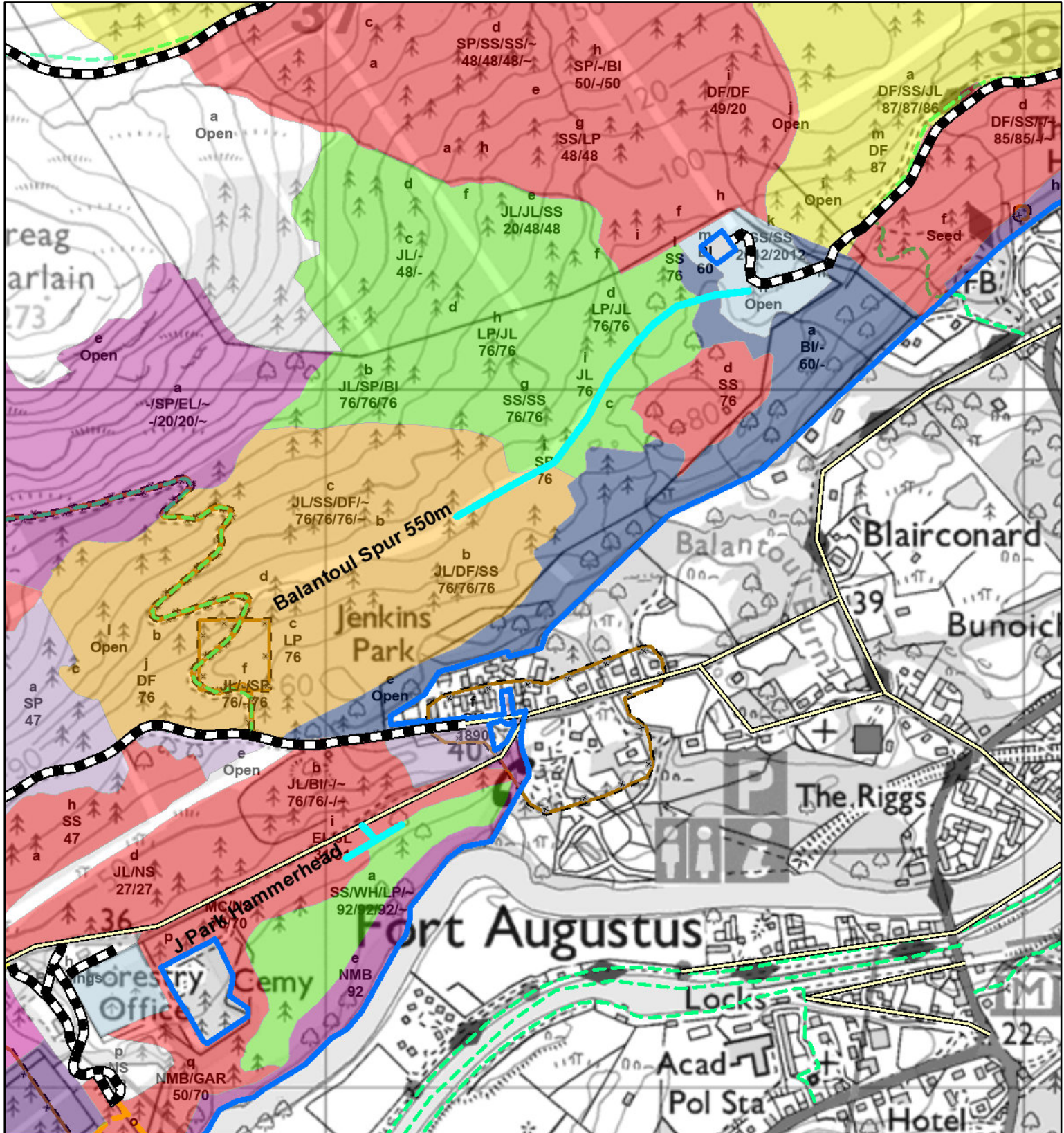
Property Details			
Property Name:	Fort Augustus Land Management Plan		
Business Reference Number:	n/a	Main Location Code:	n/a
Grid Reference: (e.g. NH 234 567)		Nearest town or locality:	Invermoriston
Local Authority:	The Highland Council		

Owner's Details			
Title:	Mr	Forename:	Christopher
Surname:	Marsh		
Organisation:	Forestry and Land Scotland	Position:	Planning Forester
Primary Contact Number:		Alternative Contact Number:	
Email:	chris.marsh@forestryandland.gov.scot		
Address:	FLS North Region Office, Tower Road, Smithton, Inverness		
Postcode:	IV2 7NL	Country:	Scotland
Is this the correspondence address?	Yes		

Agent's Details			
Title:		Forename:	
Surname:			
Organisation:		Position:	
Primary Contact Number:		Alternative Contact Number:	
Email:			
Address:			
Postcode:		Country:	
Is this the correspondence address?	Select...		

Office Use Only	
GLS Ref number:	

Environmental Impact Assessment Screening Opinion Request Form

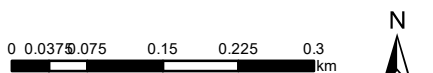


Ph.1 Planned Rds Ft Aug

Scale @ A4: 1:7,500

Date: 14/08/2024

Author: Chris Marsh



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Legend

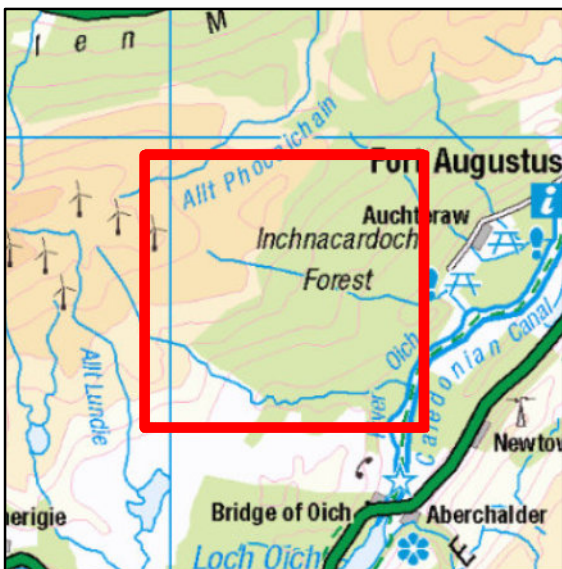
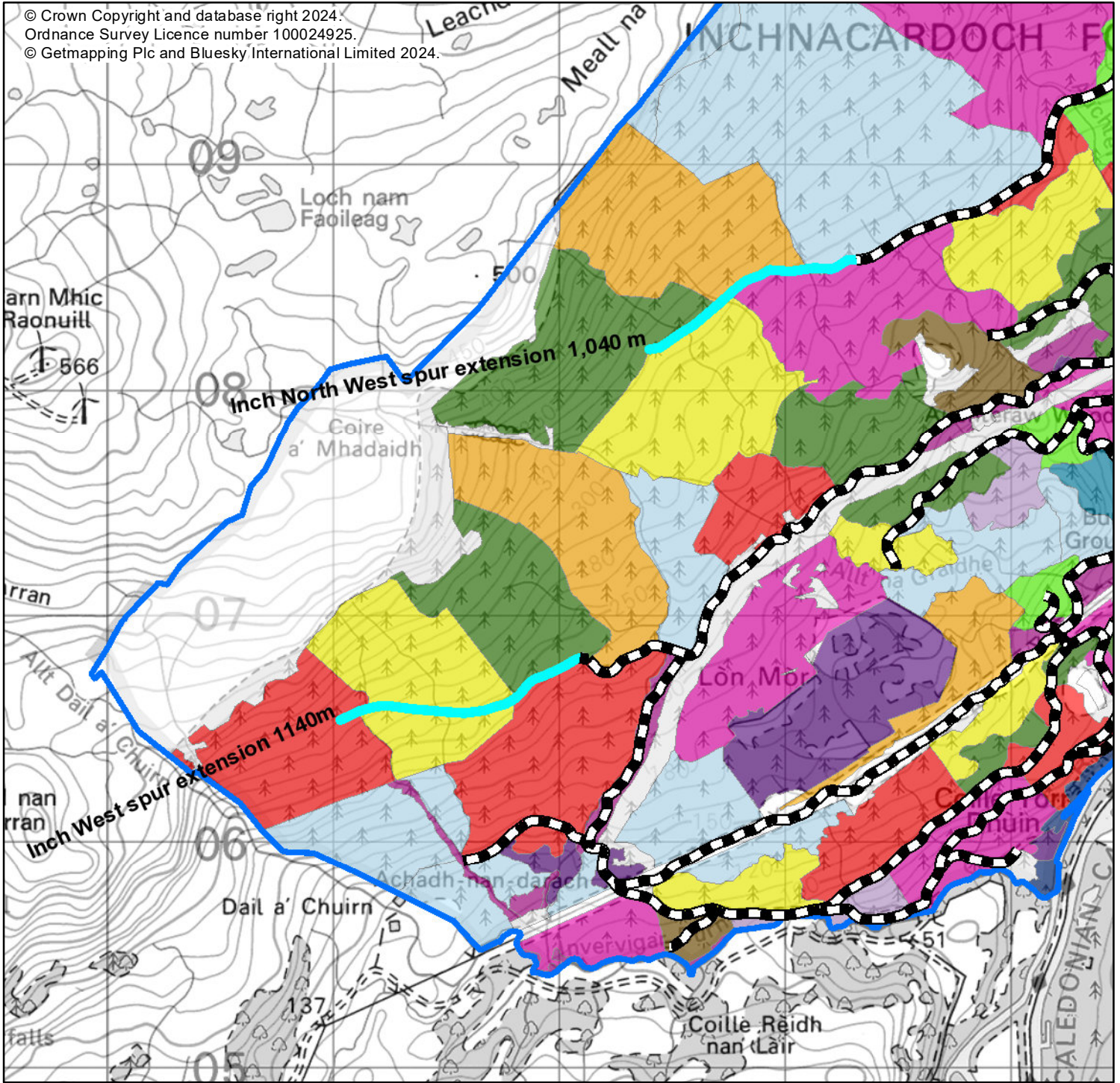
Forest Roads	Phase 1 felling (2025 - 2029)	Natural Reserve
Land Management Plan Areas	Phase 2 felling (2030 - 2034)	Minimum Intervention
Land Management Plan Areas	Phase 3 felling (2035 - 2039)	Coppice
Planned Roads	Phase 4 felling (2040 - 2044)	Low Impact Silviculture
Minor Roads (GB)	Phase 5 felling (2045 - 2049)	Open
Minor Roads (GB)	Phase 6 felling (2050 - 2054)	Missing Data
Scenario Management Coupes (Felling Year)	Phase 7 felling (2055 - 2059)	Core Paths (Scot.)
Felled or fell year requires review (before current year)	After 2059	Core Paths (Scot.)
Felled or fell year requires review (before current year)	Long Term Retention (Fell after Phase 3)	Heritage
		Heritage

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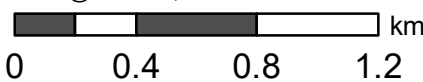
Legend

- Forest Roads**
 - Black dashed line: Forest Roads
 - Cyan line: Planned Roads
- Land Management Plan Areas**
 - Blue outline: Land Management Plan Areas
- Scenario Management Coupes (Felling Year)**
 - Magenta: Felled or fell year requires review (before current year)
 - Red: Phase 1 felling (2025 - 2029)
 - Orange: Phase 2 felling (2030 - 2034)
 - Yellow: Phase 3 felling (2035 - 2039)
 - Light Green: Phase 4 felling (2040 - 2044)
 - Dark Green: Phase 5 felling (2045 - 2049)
 - Teal: Phase 6 felling (2050 - 2054)
 - Brown: Phase 7 felling (2055 - 2059)
 - Light Blue: After 2059
 - Dark Purple: Long Term Retention (Fell after Phase 3)
- Other**
 - Dark Blue: Natural Reserve
 - Purple: Minimum Intervention
 - Olive Green: Coppice
 - Light Purple: Low Impact Silviculture
 - White: Open
 - Red and Blue checkered: Missing Data

Ph.1 Planned Rds Inchnacardoch Chris Marsh

Scale @ A4: 1:25,000

Date: 14/08/2024



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Ph.1 Invermoriston Link Rd

Author: Chris Marsh

Scale @ A4: 1:15,000

Date: 14/08/2024

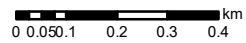
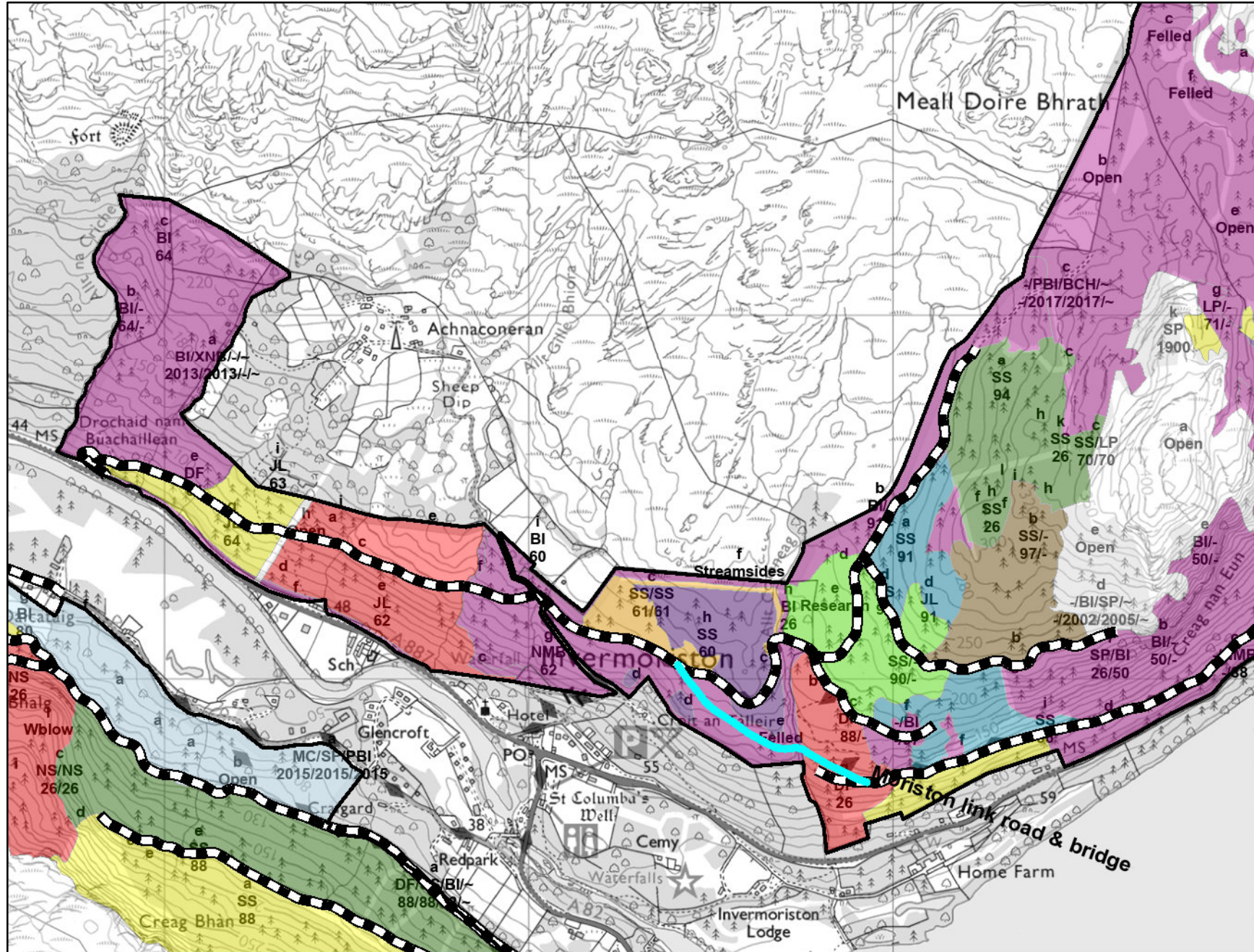
Legend

Land Management Plan Areas

Planned Roads

Forest Roads

Forest Roads



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Ph. 1 New & upgraded roads & peatland restoration

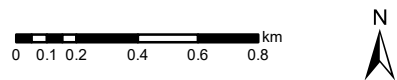
Author: Chris Marsh

Scale @ A4: 1:25,000

Date: 12/11/2024

Legend

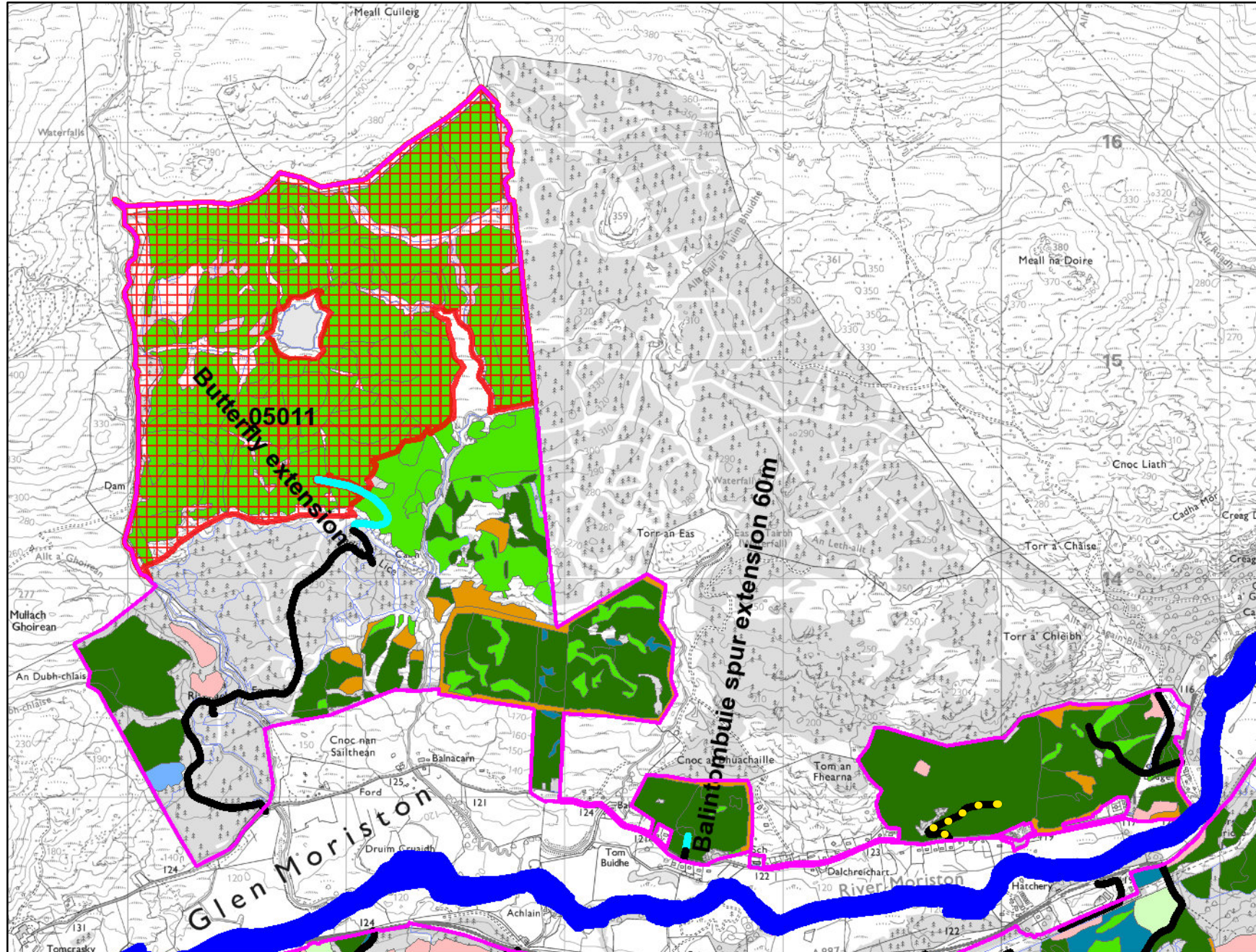
-  Special Area of Conservation
-  Land Management Plan Area
-  Forest Roads
-  Planned Roads
-  Proposed Peatland Restoration area
-  Forest Road Upgrade (460 m)

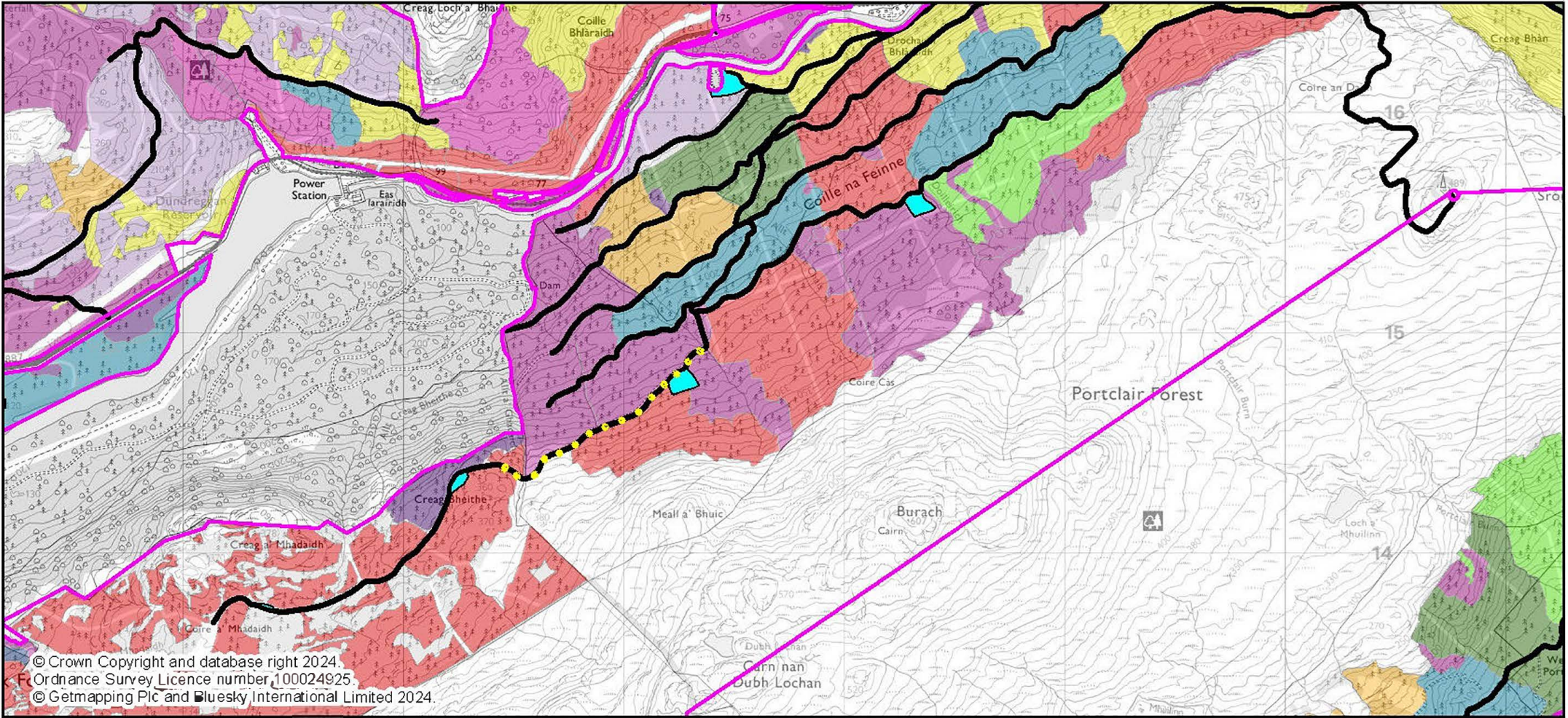


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- Legend**
- Land Management Plan Areas (Pink outline)
 - Quarries (Cyan)
 - Forest Roads (Black line)
 - Scenario Management Coupes (Felling Plan)
 - Recently Felled (Magenta)
 - Phase 1 felling (2025 - 2029) (Red)
 - Phase 2 felling (2030 - 2034) (Orange)
 - Phase 3 felling (2035 - 2039) (Yellow)
 - Phase 4 felling (2040 - 2044) (Light Green)
 - Phase 5 felling (2045 - 2049) (Green)
 - Phase 6 felling (2050 - 2054) (Blue)
 - Phase 7 felling (2055 - 2059) (Dark Blue)
 - After 2059 (Light Blue)
 - Long Term Retention (Fell after Phase 3) (Purple)
 - Natural Reserve (Dark Blue)
 - Minimum Intervention (Dark Purple)
 - Copping (Olive Green)
 - Low Impact Silviculture (Light Purple)
 - Open (White)
 - Forest Road Upgrade (1:350 m) (Yellow dashed line)

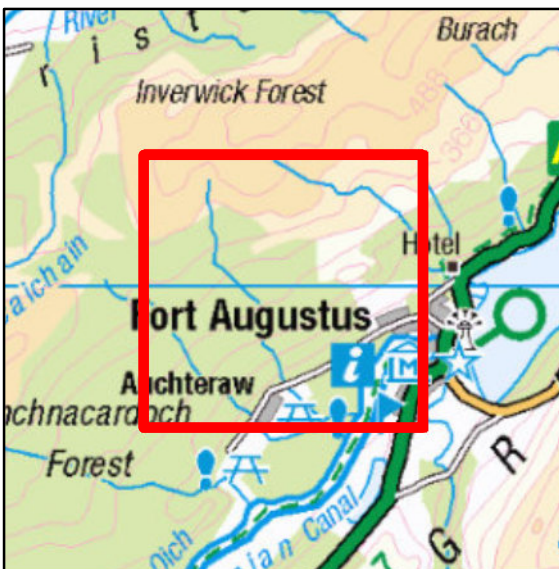
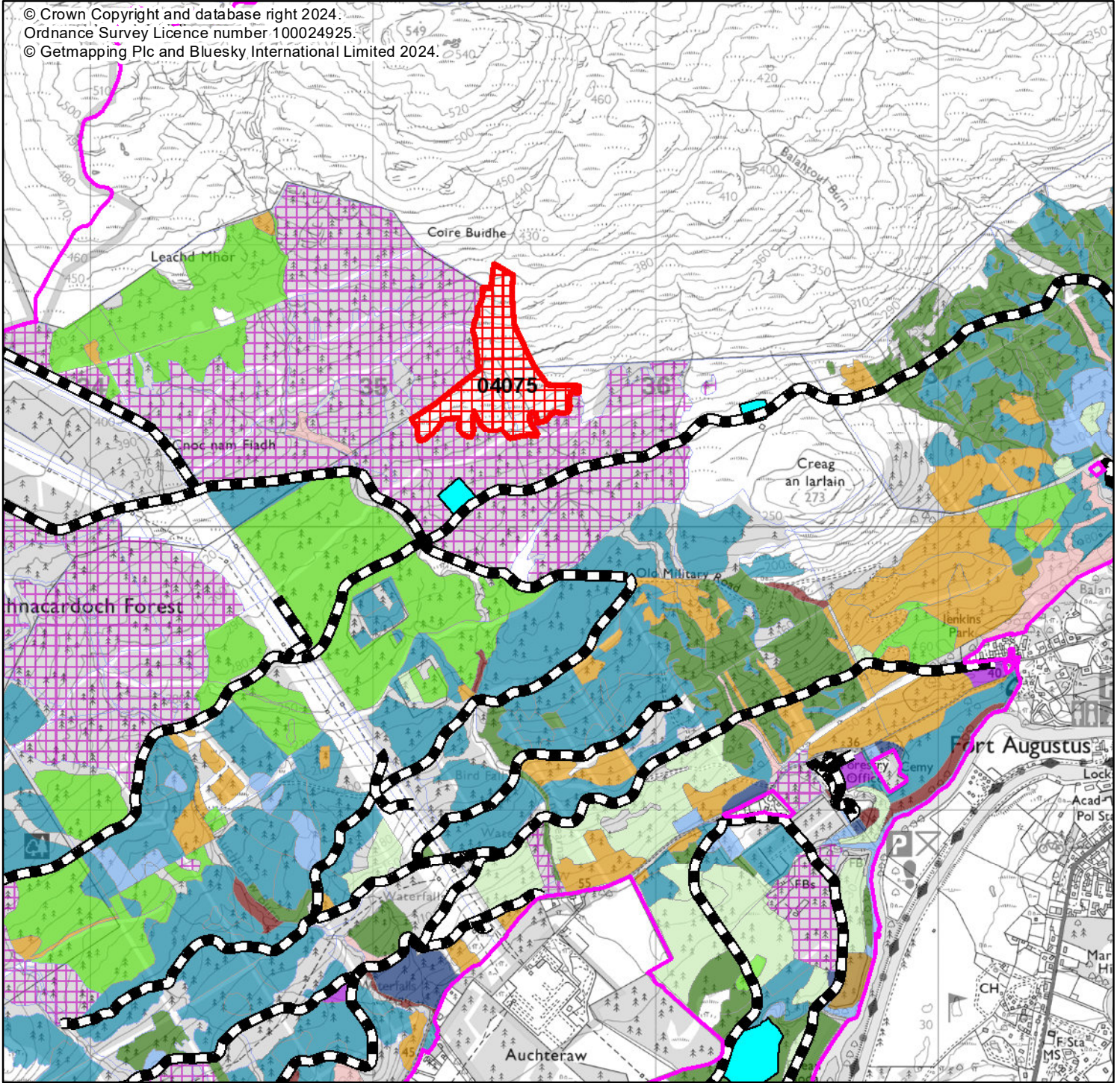
Dalcataig Extraction sites & road upgrade

Author Chris Marsh
 Scale @ A4 1:25,000
 Date 14/08/2024



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Legend

Land Management Plan Areas

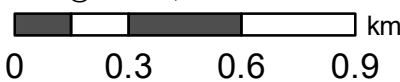
- Forest Roads
- Forest Roads
 - Quarries
 - New Woodland Proposal
 - Felled/Following

Sub-compartments (Species)

- Birch
- Oak
- Native Mixed/Other Broadleaves
- Other/Mixed Broadleaves
- Other/Mixed Conifers
- Douglas Fir
- Larch
- Lodgepole Pine
- Norway Spruce
- Scots Pine
- Sitka Spruce

Woodland Creation & scpts

Scale @ A4: 1:20,000



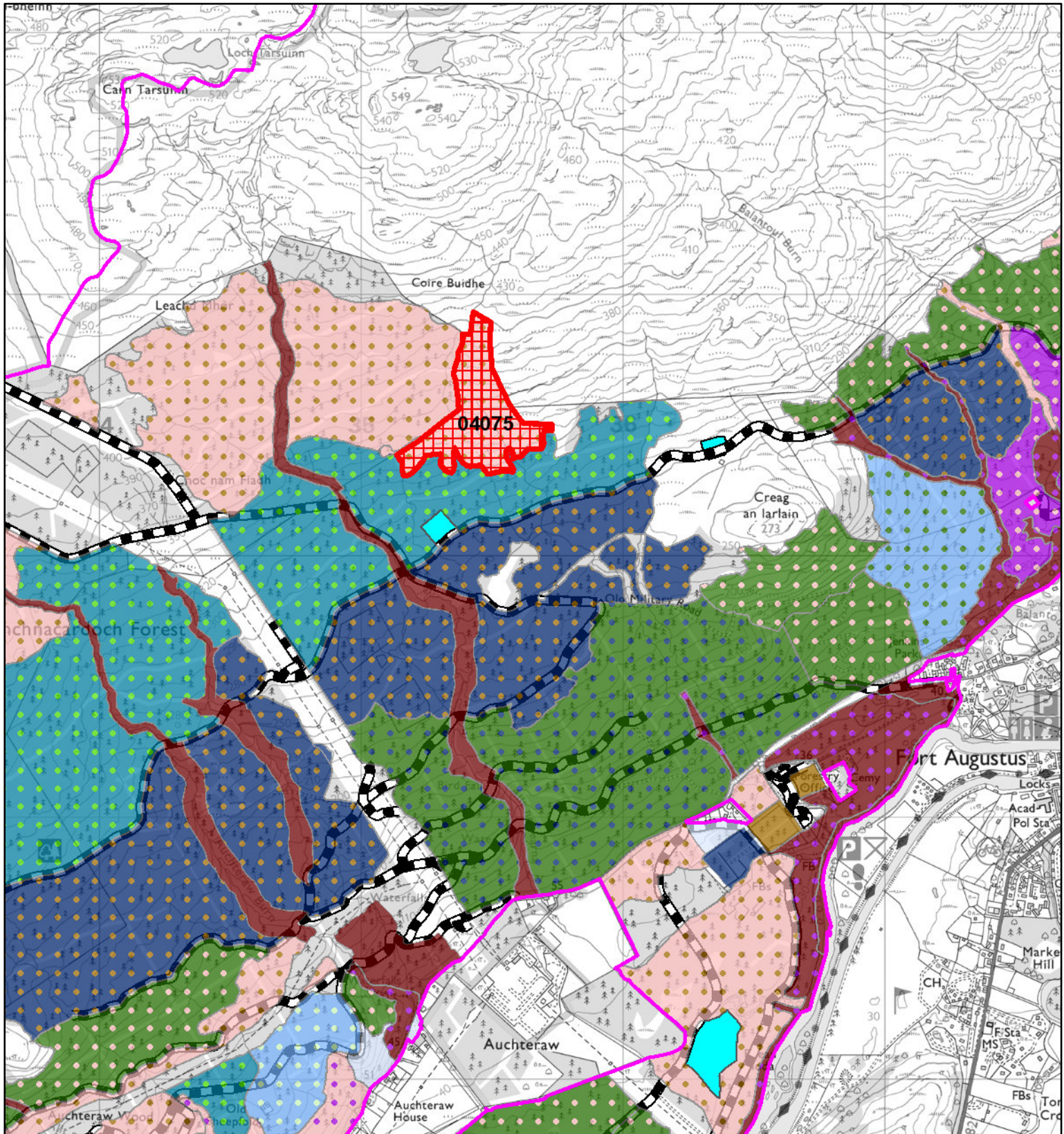
Chris Marsh

Date: 15/08/2024



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Woodland Creation & Ftr Habts

Scale @ A4: 1:20,000

Date: 15/08/2024

Author: Chris Marsh



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Restock Species

Pure and Mixtures

- Ash
- Beech
- Birch
- Douglas Fir
- Larch
- Lodgepole Pine
- Norway Spruce
- Oak

- Native Mixed/Other Broadleaves
- Other/Mixed Broadleaves
- Other/Mixed Conifers
- Scots Pine
- Sitka Spruce
- Open

- Species Mixture
- Main colour = Dominant species
- Dots = Secondary species
- Sitka spruce with Birch shown here



New Woodland Proposal

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Issues Log	Applicant's Response (FLS Planning Forester Chris Marsh: 12/11/24)	Scottish Forestry Comments	Agreed Mitigation	Status (Open, Closed)	Significance of Impact (High, Medium, Low)
Population & Human Health	No issues. Woodland creation (WC) site is at minimum 1.5 km from nearest settlement.				Low
Biodiversity	Black grouse habituate open hill and forest treeline. Nearest known lek is 600 m from WC area. FLS Environment Ranger routinely monitors annual presence/activity.		Carry out environmental walkover survey as part of standard FLS Work Planning process – to identify any novel plant/fauna presence and relevant controls/mitigation. No forest operations (gnd prep/planting) between March and June inclusive.		Medium
Land	The WC site is located above (and contiguous with) extensive afforestation managed predominantly for timber production. Dominant vegetation is grass-dominated upland (dwarf shrub) heath with a few remnant shrub willow/downy birch singletons. ESC analysis gives suitability >60% for all proposed transplant species (PBI, CAR shrub WLWs, ASP, ROW, HOL)				Low
Soil	FC 1:10k soil classification survey (A. Kennedy) shows 85% 6lf i.e. Typical Peaty Surface Water Gley (loamy: phase 1; stony: phase 2) and 15% 6lf (loamy/flushed) in accumulating hollows at sources of watercourses		No ground preparation and planting into (identified & mapped) flushed soils to avoid higher potential diffuse pollution risk (fine particle sediment run-off). Where upturned mounds are predominantly stony, invert/replace mounds and alternatively manual screef/flat plant.		Low

Water	Two permanent watercourses (<1 m width each) emanate and flow through site – both tributaries of river Oich (no environmental designations). No private water supplies or abstraction points downstream of WC area.		Adherence to all Forestry and Water Scotland guidance relevant to gnd preparation and planting operations. Postpone mechanical gnd preparation ops in periods of prolonged rainfall.		Medium
Air	No issues.				Low
Climate	No issues. Exposed upland site but within (current and C21 st predicted) climatic bounds for woodland establishment (upland birchwood and riparian woodland).				Low
Material Assets	No issues. Forest road at < 250 m from WC boundary for practical machine/transplant deployment. Productive forestry below places no future constraints on this (in perpetuity) woodland creation for conservation.				Low
Cultural Heritage	No known heritage features with WC area.				Low
Landscape	WC site at high altitude on convex, conifer afforested hillside with settlements and major vantage points (roads, loch-side) offering no views. Comparatively small WC site only visible at great distance from hill walking vantage points and will be naturalised in both composition (species, randomised densities) and shape (influenced by terrain gullies, meandering riparian corridors).		Feather planting densities to create naturalised upper treeline, randomised internal planting densities but more concentrated on drier and freer draining mounds, hillocks and gully slopes.		Low